```
GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
```

OM nucleic - nucleic search, using sw model Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries Title: Perfect score: Run on: Database : Minimum DB seq length: 0
Maximum DB seq length: 2000000000 Total number of hits satisfying chosen parameters: Searched: Scoring table: Sequence: March 7, 2004, 05:28:16; Search time 10901 Seconds (without alignments) 11204.538 Million cell updates/sec 3470272 seqs, 21671516995 residues IDENTITY_NUC Gapop 10.0 , Gapext 1.0 GenEmbl:* gb_pat.
gb_ph:*
gb_pr:*
gb_pr:*
gb_ro:*
gb_ro:*
gb_sts:*
gb_sts:*
gb_sts:* gb ba:*
gb htg:*
gb in:*
gb om:* em htg hum: *
em htg inv: *
em htg other: *
em htg other: *
em htg mus: *
em htg rod: *
em htg mam: *
im htg mam: *
im htg vrt: *
m sy: * em_htgo_hum:*
em_htgo_mus:*
em_htgo_other:* em on:
em or:
em ov:
em ov:
em patt:
em pat:
em pl:
em sts:
** em_in:* em_un:* em_hum:* em_fun:* 6940544

Pred. No. is the number of results predicted by chance to have a

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result

ALIGNMENTS

TITLE JOURNAL	REFERENCE	ORGANISM	KEYWORDS	VERSION	DEFINITION	LOCUS	RESULT 1 BD016833
Novel cytidine deaminase Patent: JP 2001245669-A 6 11-SEP-2001;	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 2818)	Homo sapiens (numan)	JP 2001245669-A/6.	BD016833,1 GI:22558009	Novel cytidine deaminase.	BD016833 2818 bp DNA linear PAT 27-AUG-2002	

, 8	F &	P 8	dg VQ	Оу	D	DD QQ	Db Qy	B &	Qy dd	Qy db	Qy Db	Query Ma Best Loo Matches	ORIGIN	FEATURES source				COMMENT
601 ACAGCTTCGGCGCATCCTTTTGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCG 660 661 TACTTTGGGACTTTGATAGCAACTTCCAGGAATGTCACACGCATGAAATATCTCTGCTG 720	ACAGCTTCGGCGCATCCTTTTGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCG 6	541 CCATGAAAGAACTTTCAAAGCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTCCCAG 600	481 GCAAATAGCCATCATGACCTTCAAAGATTATTTTTACTGCTGGAATACTTTTGTAGAAAA 540 	421 CTTCTGTGAGGACCGCAAGGCTGAGCCCGAGGGGCTGCGGCGGCTGCACCGCCGCGGGT 480	361 GGCCGACTITCTGCGAGGGAACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCTCTA 420	301 CTGCTACCGCGTCACCTGGTTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGT 360	241 CTGCCACGTGGAATTGCTCTTCCTCCGCTACATCTCGGACCTGGGACCTAGACCCTGGCCG 300	181 GAGGCGTGACAGTGCTACATCCTTTTCACTGGACTTTTGGTTATCTTCGCAATAAGAACGG 240	121 ATTCAAAAATGTCCGCTGGGCTAAGGGTCGGCGTGAGACCTACCT	61 AGACACTCTGGACACCACTATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCA 120 [AGAGAACCATCATTAATTGAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGGAGGCAAGA 60	Match 100.0%; Score 2818; DB 6; Length 2818; Local Similarity 100.0%; Pred. No. 0; see 2818; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	/organism="Homo sapiens" /mol_type="genomic DNA" /db_xref="taxon:9606"	FT CDS	PC C12N5/10,C12N9/78,C12P21/02,C12P21/08//(C12N1/21,C12R1:19), PC (C12N5/10,C12R1:91),C12N15/00,C12N5/00,C12R1:91) CC FH Key (1)(79)	PC A61P27/02,A61P27/16,A61P37/02,A61P37/08,C07K16/18,C12N1/19, PC C12N1/21,	P-2001 R-2000 JP 2000092981 R-2000 MASAMICHI MURAMATSU	JAPAN TOBACCO INC,TASUKU HONJO OS Homo sapiens (human) PN JP 2001245669-A/6
g dg	g gy	B 2	? B &	B 9	Db Qy	ע אַנ	dd Qy	B &	}	dd dd	ρ <i>δ</i>	dd	QQ	Qy	dd YQ	B &	B 4	S B
TGGCTTGAACACAGGTGTTCAAGGCCAGCCTGGGCAACATAACAAGATCCTGTCTCTCAA	1681 AGCTGCGAACCGTGGCACACGCTCATAGTTCTAGCTGCTTGGGAGGTTGAGGAGGGAG	21 GATGCTTCTCCCAAAGGTATATTAACTATATAGAGAGTTGTGACAAAACAGAATGATAA 	61 GGSTCTCTTCARCTCAGAAATGCCAATCAGGTCAAGGTCTGCTACATTTTGTATGTGTGT 16 [61 GGGTCTCTTCATCTCAGAAATGCCAATCAGGTCAAGGTTTGCTACATTTTGTATGTGTGT 16 [61 GGGTCTCTTCATCTCAGAAATGCCAATCAGGTTTGCTAAGATTTTGTATGTGTGT 16	01 GCAAACAATTGGAAGGTTGCTTGAATGTTGGGGAGAGGAAAATCTATTGGCTCTCGT 15	41 AAACTOTTTTAAGGAAGTOCOTAATTTAGAAACACOCACAAACTTCACATATCATAATTA 15 	81 TGTGAACAAGACACCCTAATAATGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAACGC 14	21	61 CAGAAGCAIGITTITAIGITIGIACAAAAGAAGATIGITAIGGGIGGGGATGAAGGTATA 132 61 CAGAAGCAIGITTITAIGITTGTACAAAAGAAGATTGTTAIGGGIGGGGATGAAGGTATA 132	51 GACCCCAAACCATCTCTCCAAAGCATTAATATCCAATCATCCGCTGTATGTTTTAATCAG 12 61 GACCCCAAACCATCTCTCCCAAAGCATTAATATCCAATCATGCGCTGTATGTTTTTAATCAG 12 61 GACCCCAAACCATCTCTCCCAAAGCATTAATATCAGTCGCGTGTATGTTTTTAATCAG 12	AAACTOTTCCATCAGGCCATGATCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGT 1		021	961 961	901 GCAACATTGTCCCCTACTGGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGT 960 	841 AAAATAGAGAAGGAACACAGGTCTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAAT 900 	781 TTTCTTAGAGTTTACAGAAAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTTG 840		າ ຄ

Qy 184 GCGTGACAGTGCTACAC		431 2791 bp mRNA linear par 03-00m-2000	2 31 AB040	RESULT 2 AB040431 LOCUS
Qy 124 CAAAAATGTCCGCTGG		"AAAATAAAAATCAGTATGATGGATAAACTTGAAAAAAAAA	2761 TAAA 2761 TAAA	gb QY
Qy 64 CACTCTGGACACCACTI		TITGGAAGCIGTGAAGATAAAATACCAAATAAAATAATATAAAAGTGATTATATGAAGT 2760	701	, B &
Qy 4 GAACCATCATTAATTG		27		₽ ₽
Query Match Best Local Similarity 100.0 Matches 2791; Conservative		GTAATTGTAACATTGCAGTAATGGTGCTACGAAGCCATTTCTCTTGATTTTTAGTAAACT 2640	581	do dy
/db_xref= /translat /translat DFGYLENKN NLSLRIFTA. AWEGLHENS' ORIGIN		TTATTATTATTTTGCGTCTAATGATTTTTTTATAACATGATTTCCTTTTCCTGATATATTGA 2520 AATGGAGTCTCAAAGCTCCAAACTTTATAACTTTAGAAATGATTCTAATAACAACGTAT 2580 AATGGAGTCTCAAAGCTTCATAAATTTATAACTTTAGAAATGATTCTAATAACAACGTAT 2580 AATGGAGTCTCAAAGCTTCATAAATTTATAACTTTAGAAATGATCCTAATAACAACGTAT 2580	461 521 521	90 V
CDS 77673 /gene="AI" /codon_st /product= /protein_		TARTGETACATAAGTTTGTAAAAGAGTTAAAAATTGTTACTTCATGTATTCATTTATATT 2460 TTATTGTACATAAGTTTGTAAAAGAGTTAAAAATTGTTACTTCATGTATTCATTTATATT 2460 TTATTGTACATAAGTTTGTAAAAGAGTTAAAAATTGTTACTTCATGTATTCATTTATATT 2460 TTATTATTATTTCGGTCTAATGATTTTTATTAACATGATTTCCTTTTCTGATATATTTGA 2520	2401 T	8 B 8
/mol type /mol type /db_xref= /db_xref= 1791 /qene="Ai"		TGCAATGAAGATGAGCAGATCCACAGGAAAACTTGAATGCACAACTGTCTTATTTTAATC 2400		ob Oy
Kyoto, Kyoto 606-8 Tel:81-75-733-4371 FEATURES Location/ Source 12791		GACAGTGAGAAAAATATTCAGAATAACCATATCCCTGTGCCGTTATTACCTAGCAACCCT 2340 		Qy Db
FORMAS MULO,:, MURAMACEU TITLE Direct Submission JOURNAL Submitted (18-MAR- of Medical Chemist	-	CCAATAAGGGATCCCTATTTGTCTCTTTTGGTGTCTATTTGTCCCTAACAACTGTCTTT 2280	2221 G 2221 G	Db Qy
MEDLINE 2040541 PUBMED 1107475 REFERENCE 3 (bases 1 to 279 REFERENCE W. T.		GGAGAGAAGGATGGGGAAGCATTGCAAGGAAATTGTGCTTTATCCAACAAAATGTAAGGA 2220 	2161 G 2161 G	d dd
		GACTCTGTCTCAGAAAAAAAAAAAAAAAAAAGAGAGAGAG	2101 A 2101 A	99 4g
<pre>/ (Sices) Revy, P., Muto, Catalan, N., Fo Tezcan, I., Ers</pre>		GGTGGAGGTTGCAGTAAGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCA 2100	2041 G 2041 G	8 8 8
JOURNAL Genomics 68 (1), 8 MEDLINE 20408890 PUBMED 10950930		AGGCACCTGTAATCCCAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGA 2040	1981 A 1981 A	g &
REFERENCE 1 (eites) AUTHORS Muto, T., Muramatsu TITLE Isolation, tissue		GGCCAACATGGCAAAACCCCGTCTGTACTCAAAATGCAAAAATTAGCCAGGGTGGTAGC 1980 	1921 G 1921 G	D Q
S AID; activation-i Homo sapiens (hum ISM Homo sapiens Eukaryota; Metazo		T 192	1861 C	Qy Db
NOIL		AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	1801 A 1801 A	Qy Db

Locus

AB040431

2791 bp

mRNA

linear

PRI

03-OCT-2000

ATCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGGCTG

```
0.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R-2000) Tasuku Honjo, Kyoto University, Department stry, Faculty of Medicine, Yoshida, Sakyo-ku, -8501, Japan (2-mail:honjo@mfour.med.kyoto-u.ac.jp, 71(ex.4371), Fax:81-75-753-4388)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             L="activation-induced cytidine deaminase"
1. id="BAB12721.1"
2. id="BA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ed cytidine deaminase (AID) deficiency causes the ive form of the Hyper-IgM syndrome (HIGM2) 5-575 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  , Levy,Y., Geissmann,F., Plebani,A., Sanal,O., eille,M., Dufourcq-Lagelouse,R., Gennery,A.,,F., Kayserili,H., Ugazio,A.G., Brousse,N., tarangelo,L.D., Kinoshita,K., Honjo,T., Fischer,A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              su,M., Taniwaki,M., Kinoshita,K. and Honjo,T.
e distribution, and chromosomal localization of the
-induced cytidine deaminase (AID) gene
85-88 (2000)
ATCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGGCTG
                                                                                                                                                                                                                                                                                                                                                                              TATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sm="Homo sapiens"
pe="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         oa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                988409
induced cytidine deaminase;
                                                                                                                          GGCTAAGGGTCGGCGTGAGACCTACCTGTGCTACGTAGTGAAGAG
                                                                                                                                                                                         GGCTAAGGGTCGGCGTGAGACCTACCTGTGCTACGTAGTGAAGAG 183
                                                                                                                                                                                                                                                                                                                   TATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGGAGGCAAGAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tart=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    su, M., Taniwaki, M., Kinoshita, K. and Honjo, T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mRNA for activation-induced cytidine deaminase,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 2791; Di
;; Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 2791;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AID.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                     180
                        243
                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                           123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

2404 TIGTACATAAGTTIGTAAAAGAGTTAAAAATTGTTACTTCATGTATTCATTTATATTTTA 2463		324 CATGCATGGTCACCTTCAAGCTACTTTAATAAAGGATCTTAAAATGGGCAGGAGGACTGT 13	5
2344 AATGAAGATGAGCAGATCCACAGGAAAACTTGAATGCACAACTGTCTTATTTTAATCTTA 2403 	B &	264 AAGCATGTTTTTATGTTACAAAAAAAAAATTGTTATGGGTGGG	용 성
2284 AGTGAGAAAATATTCAGAATAACCATATCCCTGTGCCGTTATTACCTAGCAACCCTTGC 2343 	9 dg	04 CCCAAACCATCTCCCAAAGCATTAATATCCAATCATGCGCTGTATGTTTTAATCAGCAG 1	유 성
2224 AATAAGGGATCCCTAFTTGTCTCTTTTGGTGTCTAFTTGTCCCTAACAACTGTCTTTTGAC 2283	Db .	1144 CTCTTCCATCAGGCCATGATCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTGAC 1203	유 성
4 4	Qy dd	ACAAA 1 ACAAA 1	용 성
2104 CTCTGTCTCAGAAAAAAAAAAAAAAAAGAGAGAGAGAGAAAGAGAACAATATTTGGGA 2163 	Qy Db	ACAGT 1	유 성
2044 GAAGGTTGCAGTAAGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCCAAGA 2103	אָס מם	964 CGTTTTTCTATGACTTTTAGGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCL 	음 성
	QY	904 ACATTGTCCCCTACTGGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAG	음 성
4 4	Q 43	844 ATAGAGAAGGAACACAGGTCTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGCA 903	유 성
864 CACTITIGGANGCCUGGCCGGGTGATTCACCTGTGGTCAGGGTTTGAGACCAGCCTGGC 861 CACTITIGGANGGCCGGGCGGGGTGACCTGTGGTCAGGAGTTTGAGACCAGCCTGGC 862 CACTITIGGANGGCCGGGCGGGGGGGGTGACCTGTGGTCAGGAGTTTGAGACCAGCCTGGC	, p &	784 CTTAGAGTTTACAGAAAAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAAA 843 	음 성
04 AAAAAAAAAAAAAAAAGAAGAGGCCGGGGGGGGGGGGG	p &	724 ACAGTGGATAAAAAAAACAGTCCTTCAAGTCTTCTGTTTTTTTT	음 성
CITGAACACAGGIGITCAAGGCCAGCCTGGGCAACATAACAAGATCCTGTCTCTCAAAAA	, p. 8	664 TTTGGGACTTTGATAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAG 723 	유 성
684 TGCGAACCGTGGCACACGCTCATAGTTCTAGCTGGCTTGGGAGGTTGAGGAGGAGGAGGATGG	S & &	604 GCTTCGGCGCATCCTTTTGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTAC 663	음 성
24 GCTTCTCCCAAAGGTATATTAACTATATAAGAGAGTTCTGACAAAACAGAATGATAAAGC 	4d 70	544 TGARAGRACTITCARAGCCTGGGRAGGGCTGCRIGRARATTCRGTTCGTCTCCCRGRCR 603	유
4 TCTCTTCATCTCAGAAATGCCAATCAGGTCAAGGTTTGCTACATTTTGTATGTGTGTG	D QY	484 AATAGCCATCATGACCTTCAAAGATTATTTTTACTGCTGGAATACTTTTGTAGAAAACCA 543 	음 성
04 AACAATTGGAAGGAAGTTGCTTGAATGTTGGGGAGGAAAATCTATTGGCTCTCGTGG 	dd YQ	424 CTGTGAGGACCGCAAGGCTGAGGCCCGAGGGGCTGCGCCGCGCGCG	용 성
444 CTCTTTTAAGGAAGTCCCTAATTTAGAAACACCCACAAACTTCACATATCATAATTAGCA	λ λ	364 CGACTTTCTGCGAGGGAACCCCAACCTCAGTCTGAGGATCTTCACCGCCGCCCCTTACTT 423	유
384 GAACAAGACCITAATAATGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAAGGCAAA	4d 4d	304 CTACCGCGTCACCTGGTTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGTGGC 363	음 성
	Db	244 CCACGTGGAATTGCTCTTCCTCCGCTACATCTCGGACTGGGACCTAGACCCTGGCCGCTG 303	유

Query Match Query Match Procal Similarity 99.8%; Score 2174.6; DB 6; Length 6564; Best Local Similarity 99.8%; Pred. No. 0; Matches 2177; Conservative 0; Mismatches 4; Indels 0; Gaps 0; Qy 617 CITTIGCCCCIGTATGAGGTIGATGACTTACGAGACGCATTICGTACTTTGGGACTTTGA 676	PD 11-SEP-2001 PF 28-MAR-2000 JP 200092981 PF 28-MAR-2000 JP 200092981 PI TASUKU HONAO, MASAMICHI MURAMATSU PC C12N15/09, A61K39/395, A61P1/00, A61P11/06, A61P13/12, PC A61P17/00, PC A61P27/02, A61P27/16, A61P37/02, A61P37/08, C07K16/18, C12N1/19, PC C12N1/21, PC C12N5/10, C12N9/78, C12P21/02, C12P21/08/(C12N1/21, C12R1:19), PC C12N5/10, C12R1:91), C12N15/00, C12N5/00, C12R1:91) CC PC C12N5/10, C12R1:91), C12N15/00, C12N5/00, C12R1:91) CC PC C12N5/10, C12R1:91) Location/Qualifiers. FH Key Location/Qualifiers Location/Qualifiers /organism="Homo sapiens" /mol_type="genomic DNA" /db_xref="taxon:9606"	SULT 3 016835 016835 016835 BD016835 CESSION BD016835 BD016835.1 GI:22558011 FORCE	Db 2401 TIGTACATAAGITITGAAAAAATTGTTAAAAATTGTTACTTCATGTATTATATTTTA 2460 Qy 2464 TATTATTTTGCGTCTAATGATTTTTATTAACATGATTTCCTTTTCTGATATATTTAAAT 2523 Db 2461 TATTATTTTGCGTCTAATGATTTTTTATTAACATGATTTCCTTTTCTAATAACAACGTATGTA 2520 Qy 2524 GGAGTCTCAAAGCTTCATAAATTTATAACTTTAGAAATGATTCTAATAACAACGTATGTA 2580 Qy 2521 GGAGTCTCAAAGCTTCATAAATTTATAACTTTAGAAATGATTCTAATAACAACGTATGTA 2580 Qy 2584 ATTGTAACATTGCAGTAATGATTTATAACTTTTAGAAATGATTTATAGTAAACTTTT 2643 Db 2581 ATTGTAACATTGCAGTAATGGTGCTACGAAGCCATTTCTCTTGATTTTTAGTAAACTTTT 2640 Qy 2644 ATGACAGCAAATTTGCTTCTGGCTCACTTCAATCAATGATTAAATGATAAATTTT 2703 Db 2641 ATGACAGCAAATTTGCTTCTGGCTCACTTTCAATCAATGAATAAATA
QY 1637 GTATATTAACTATATAAGAGAGTTGTGACAAAACAGAATGATAAAGCTGCGAACCGTGGC 1696 Db 4755 GTATATTAACTATTAAAGAGAGTTGTGACAAAACAGAATGATAAAGCTGCGAACCGTGGC 4814 QY 1697 ACACGCTCATAGTTCTAGCTGCTTGGAGAGGTTGAAGAGGATGGCTTGAACACAGGT 1756	4 1 4 1 4 1 4 1	Oy 1097 GATTITICTATTCTTTTCCCTTGACGTTTACTTTCAAGTAACACAAACTCTTTCCATCAGG	Oy 737 AACAGTCCTTCAAGTCTTCTCTGTTTTTATTCTTCAACTCTCACTTTCTTAGAGTTTACA 796 Db 3855 AACAGTCCTTCAAGTCTTCTCTGTTTTTATTCTTCAACTCTCACTTTCTTAGAGTTTACA 3914 Oy 797 GAAAAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAAAATAGAGAAGGAAC 856 Db 3915 GAAAAAATATTTATATACGACTCTTTAAAAAAGATCTATGTCTTGAAAATAGAGAAGGAAC 3974 Oy 857 ACAGGTCTGGCCAGGGACGTGCTGCAATTGGTCCAACTTTTGAAAAAAAA

g

g

```
RESULT 4
BD016860
LOCUS
                                                                                                                                                                           5
                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                뮍
                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                            몂
                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                   맑
                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뭕
                                                                                                                 Ś
                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      뮍
          DEFINITION
                                                                                              吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                     5835
                                                                                                                                                                                2717
                                                                                                                                                                                                              5775
                                                                                                                                                                                                                                                                                                                              5655
                                                                                                                                                                                                                                                                                                                                                                                     5595
                                                                                                                                                                                                                                                                                                                                                                                                                                              5535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5295
                                                                                                                                                                                                                                       2657
                                                                                                                                                                                                                                                                                                2597
                                                                                                                                                                                                                                                                                                                                                        2537
                                                                                                                                                                                                                                                                                                                                                                                                                2477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1817
       BD016860
Novel cyt
                                                                                                            TATGATGGAATAAACTTGAAA
                                                                                                                                                                     TGCTTCTGGCTCACTTTCAATCAGTTAAATAAATGATAAATATTTTTGGAAGCTGTGAAG
                                                                                                                                                                                                                                                                                       AGTAATGGTGCTACGAAGCCATTTCTCTTGATTTTTAGTAAACTTTTATGACAGCAAATT
                                                                                                                                                                                                                                                                                                                        TTCATAAATTTATAACTTTAGAAATGATTCTAATAACAACGTATGTAATTGTAACATTGC
                                                                                                                                                                                                                                                                                                                                           TTCATAAATTTATAACTTTAGAAATGATTCTAATAACAACGTATGTAATTGTAACATTGC
                                                                                                                                                                                                                                                                                                                                                                                CTAATGATTTTTTATTAACATGATTTCCTTTTCTGATATATTGAAATGGAGTCTCAAAGC
                                                                                                                                                                                                                                                                                                                                                                                                          CTAATGATTTTTTTATTAACATGATTTTCCTTTTTCTGATATTTGAAATGGAGTCTCAAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGTAAAAGAGTTAAAAATTGTTACTTCATGTATTCATTTATATTTTATATTATTTTTGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGATCCACAGGAAAACTTGAATGCACAACTGTCTTATTTTAATCTTATTGTACATAAGTT
                                                                                            TATGATGGAATAAACTTGAGA
                                                                                                                                                  AGTAATGGTGCTACGAAGCCATTTCTCTTGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                         TGTAAAAGAGTTAAAAATTGTTACTTCATGTATTCATTTATATTTTATATTTTTGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGATCCACAGGAAAACTTGAATGCACAACTGTCTTATTTTAATCTTATTGTACATAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCAGAATAACCATATCCCTGTGCCGTTATTACCTAGCAACCCTTGCAATGAAGATGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCAGAATAACCATATCCCTGTGCCGTTATTACCTAGCAACCCTTGCAATGAAGATGAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATTTGTCTCTTTTTGGTGTCTATTTGTCCCTAACAACTACTGTCTTTGACAGTGAGAAAAAATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PAGCATTGCAAGGAAATTGTGCTTTATCCAACAAAATGTAAGGAGCCAATAAGGGATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCCGACAAGAGCAAGAGCTCTGTCTCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCCCGTCTGTACTCAAAATGCAAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAGAAAGAGAGAGGCCGGGCGTGGTGGCTCACGCCTGTAATCCCAGCACTTTTGGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGAAAGAGAGAGGGCCGGGCGTGGTGGCTCACGCCTGTAATCCCCAGCACTTTGGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATTTGTCTCTTTTGGTGTCTATTTGTCCCTAACAACTGTCTTTGACAGTGAGAAAAATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAGCATTGCAAGGAAATTGTGCTTTATCCAACAAAATGTAAGGAGCCAATAAGGGATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAGACTCTGTCTCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCTACTTGGGAGGCTGAGGAGAGAATCGCTTGAACCCCAGGAGGTGGAGGTTGCAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCCGTCTGTACTCAAAATGCAAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGAGGTGGAGGTTGCAGTA
       cytidine
       deaminase
                   11204
                                                                                            5915
                                                                                                                       2797
                   å
                   DNA
                   linear
                   PAT
                   27-AUG-2002
                                                                                                                                                  5894
                                                                                                                                                                              2776
                                                                                                                                                                                                         5834
                                                                                                                                                                                                                                    2716
                                                                                                                                                                                                                                                                5774
                                                                                                                                                                                                                                                                                           2656
                                                                                                                                                                                                                                                                                                                                                    2596
                                                                                                                                                                                                                                                                                                                                                                                5654
                                                                                                                                                                                                                                                                                                                                                                                                                                         5594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5174
                                                                                                                                                                                                                                                                                                                        5714
                                                                                                                                                                                                                                                                                                                                                                                                             2536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
VERSION
KEYWORDS
SOURCE
                Ś
                                              멍
                                                                   8
                                                                                                    밁
                                                                                                                          $
                                                                                                                                                            밁
                                                                                                                                                                                   S
                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                    Ď,
                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                     맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 2177; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Novel cytidine deaminase
Novel cytidine deaminase
AL Patent: JP 2001245669-A 3 11-SEP-2001;
JAPAN TOBACCO INC, TASUKU HONJO
OS Homo sapiens (human)
PM JP 200124569-A/33
PD 11-SEP-2001
PF 28-MAR-2000 JP 2000092981
PF 28-MAR-2000 JP 2000092981
PF C12N15/09, A61K39/395, A61K39/395, A61P1/00, A61P11/06, A61P13/12,
PC A61P17/00,
PC A61P17/00,
PC A61P17/00, A61K39/395, A61F37/02, A61P37/08, C07K16/18, C12N1/19, PC
C12N15/10, C12N19/78, C12P21/02, C12P21/08//(C12N1/21, C12N1/19), PC
C12N5/10, C12R1:91), C12N15/00, C12N5/00, C12N5/00, C12R1:91) CC
FH Key
Location/Qualifiers

1 10204
                1157
                                              9430
                                                                         1097
                                                                                                     9370
                                                                                                                                 1037
                                                                                                                                                              9310
                                                                                                                                                                                                                     9250
                                                                                                                                                                                                                                                                              9190
                                                                                                                                                                                                                                                                                                                                     9130
                                                                                                                                                                                                                                                                                                                                                                                               9070
                                                                                                                                                                                                                                                                                                                                                                                                                                                      9010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8950
                                                                                                                                                                                          977
                                                                                                                                                                                                                                                 917
                                                                                                                                                                                                                                                                                                          857
                                                                                                                                                                                                                                                                                                                                                                   797
                                                                                                                                                                                                                                                                                                                                                                                                                         737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
Eukaryota; Metazoa; Che
Mammalia; Eutheria; Pr.
1 (bases 1 to 11204)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BD016860
BD016860.1 GI:22558036
JP 2001245669-A/33.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens (human)
CCATGATCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTGACCCCCAAACCATCTC
                                                                                                                    TTTTTATATCAACATCCTTTATTTGATTCATTTGAGTTJAACAGTGGTGGTTAGTGATA
                                                                                                                                                                                                                                                                                                                                    GAAAAAATATTTATATACGACTCTTTAAAAAAGATCTATGTCTTGAAAATAGAGAAGGAAC
                                                                                                                                                                                                                                                                                                                                                       GAAAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAAAATAGAGAAGGAAC
                                                                                                                                                                                                                                                                                                                                                                                            AACAGTCCTTCAAGTCTTCTCTGTTTTTATTCTTCAACTCTCACTTTCTTAGAGTTTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                     TAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAAA
                                                             GATTTTTCTATTCTTTTCCCTTGACGTTTACTTTCAAGTAACACAAACTCTTTCCATCAGG
                                                                                                                                                           CTTTTAGGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCATGGTGAGAGGATCAAATG
                                                                                                                                                                             CTTTTAGGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCATGGTGAGAGGATCAAATG
                                                                                                                                                                                                                    CTGGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCAACGTTTTTCTATGA
                                                                                                                                                                                                                                    CTGGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCAACGTTTTTCTATGA
                                                                                                                                                                                                                                                                           ACAGGTCTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGCAACATTGTCCCCTA
                                                                                                                                                                                                                                                                                                 ACAGGTCTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGCAACATTGTCCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                 AACAGTCCTTCAAGTCTTCTCTGTTTTTTATTCTTCAACTCTCACTTTCTTAGAGTTTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTACAGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTTTTGCCCCTGIATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTGA
                                               GATTTTTCTATTCTTTTCC
                                                                                                    TTTTTATATCAACATCCTTTATTATTTGATTCATTTGAGTTAACAGTGGTGTTAGTGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JP 2001245669-A/33
11-SEP-2001
28-MAR-2000 JP 2000092981
28-MAR-2000 JP 2000092981
TASUKU HONJO, MASAMICHI MURAMATSU
C12N15/09, A61K39/395, A61K39/395, A61P1/00, A61P11/06, A61P13/12, A61P17/00,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 77.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 2174.6;
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                            CTTGACGTTTACTTTCAAGTAACACAAACTCTTCCATCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                1096
                                                                                                                                                                                                                     9309
                                                                                                                                                                                                                                                                                                                                    9189
                1216
                                            9489
                                                                       1156
                                                                                                    9429
                                                                                                                                                            9369
                                                                                                                                                                                         1036
                                                                                                                                                                                                                                                                            9249
                                                                                                                                                                                                                                                                                                                                                                                              9129
                                                                                                                                                                                                                                                976
                                                                                                                                                                                                                                                                                                         916
                                                                                                                                                                                                                                                                                                                                                                956
                                                                                                                                                                                                                                                                                                                                                                                                                         796
                                                                                                                                                                                                                                                                                                                                                                                                                                                      9069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          676
```

0;

8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	A B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B
1757 GTTCAAGGCCAGCCTGGGCAACATAACAAGATCCTGTCTCCAAAAAAAA	9490 CCATGATCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTAGCCCAAACCATCTC 9549 1217 TCCAAAGCATTAATATCCAATCATGGGTGTATGTTTTAATCAGCAGAAGCATGTTTTA 1276
RESULT 5 AB040430 LOCUS DEFINITION ACCESSION VERSION VERSION KEYWORDS SOURCE ORGANISM REFERENCE AUTHORS TITLE PUBMED REFERENCE AUTHORS TITLE JOURNAL MEDLINE REFERENCE AUTHORS TITLE JOURNAL	8 2 8 2 8 2 8 2 8 2 8 2 8 2 8 2 8 2
AB040430 AB04040 A	2297 TTCAGAATTAACCATATCCCTGTGCCGTTATTACCTAGCAACCCTTGCAATGAAGATGAAGCC2356

```
CTAGCAACCCTTGCAATGAAGATGAGC 2356
                TTATATGAAGTTAAAATAAAAAATCAG
                                                 rGATAAATAATTTTGGAAGCTGTGAAG 11049
                                                                    TGATAAATAATTTTGGAAGCTGTGAAG
                                                                                                     rtragrada crritarga ca gca a arr 10989
                                                                                                                        ITTAGTAAACTTTTATGACAGCAAATT
                                                                                                                                                          TAACAACGTATGTAATTGTAACATTGC
                                                                                                                                                                           TAACAACGTATGTAATTGTAACATTGC
                                                                                                                                                                                                             rgatatattgaaatggagteteaaage
                                                                                                                                                                                                                                   TGATATATTGAAATGGAGTCTCAAAGC
                                                                                                                                                                                                                                                                                   TCATTTATATTTTATATTATTTTGCGT
                                                                                                                                                                                                                                                                                                                                        TTATTTTAATCTTATTGTACATAAGTT
TATATGAAGTTAAAATAAAAATCAG 11109
                                                                                                                                                                                                                                                                   rcatttatatttatattatttecci
                                                                                                                                                                                                                                                                                                                       TTATTTTAATCTTATTGTACATAAGTT
                                                                                                                                                                                                                                                                                                                       10749
                        2776
                                                                            2716
                                                                                                                                2656
                                                                                                                                                          10929
                                                                                                                                                                                    2596
                                                                                                                                                                                                              10869
                                                                                                                                                                                                                                        2536
                                                                                                                                                                                                                                                                   10809
                                                                                                                                                                                                                                                                                             2476
                                                                                                                                                                                                                                                                                                                                                 2416
```

	Oy 1277 TGTTTGTACAAAA Db 9610 TGTTTGTACAAAA	Qy 1217 TCCAAAGCATTAA Db 9550 TCCAAAGCATTAA	Qy 1157 CCATGATCTATAGGA	Qy 1097 GATTTTCTATTC	Oy 1037 TTTTTATATCAACATCCT	Qy 977 CTTTTAGGTAGGA Db 9310 CTTTTAGGTAGGA	Oy 917 CTGGGAATAACAGAA Db 9250 CTGGGAATAACAGAA	Qy 857 ACAGGTCTGGCCA	Qy 797 GAAAAATATTTA Db 9130 GAAAAATATTTA	Qy 737 AACAGTCCTTCAAGT	Qy 677 TAGCAACTTCCAC Db 9010 TAGCAACTTCCAC	Qy 617 CTTTTGCCCCTGT	Query Match 7 Best Local Similarity 9 Matches 2177; Conservati	DFGYLF NLSLRI NLSLRI AWEGLF	/product= /protein /db_xref= /translat	CDS join(521) /gene="AI" /codon_st	/orgar /mol_t /db_x; join(s	FEATURES Tel:81-75-753-4 Locati source 111
	GTTTGTACAAAAGAAGATTGTTATGGGTGGGGATGGAGGTATAGACCATGGATGG	TCCAAAGCATTAATATCCAATCATGCGCTGTATGTTTTAATCAGCAGAAGCATGTTTTTA 1276 	CATGATCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTGACCCCAAACCATCTC 1216	GATTTTCTATTCTTTTCCCTTGACGTTTACTTTCAAGTAACACAAACTCTTCCATCAGG 1156	TITITATATCAACATCCTTTATTATTTGATTCATTTGAGTTAACAGTGGTGTTAGTGATA 1096	TTTTAGGTAGGATGAGAGGAGAAGGTAGATCCTAAAAAGCATGGTGAGAGGATCAAATG 1036	TGGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCAACGTTTTTCTATGA 976	TGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGCAACATTGTCCCCTA 916	GAAAAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAAAATAGAGAAGGAAC 856	CITCAAGTCTICTCIGITTTIATTCTTCAACTCTCACTITCTTAGAGTTTACA 796	TAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAAA 736 	CTTTTGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTGA 676	77.2%; Score 2174.6; DB 9; Length 11204; 99.8%; Pred. No. 0; 1ve 0; Mismatches 4; Indels 0; Gaps 0;	DFGYLRNKNGCH-BELFFLRY I SDWDLDPGRCYRYTWFYSWSPCYDCARHVADFLRGNP NLSLR I FTARLYFCEDRKAEPEGLRRLHRAGVQI A IMTPKDYFYCWNTFVENHERTFK WEGLHENSYRLSRQLRRI LLPLY EVDDLRDAFRTLGL"	product="activation-induced cytidine deaminase" protein_id="BAB12720.1" db_xref="c1:998408" translation="MDSLLMNRRKFLYQFKNVRWAKGRRETYLCYVVKRRDSATSFSL	JEHEFALD. 0in(521.528,62806427,78078077,83718486,89569009) gene "AID" codon start=1	organism="Homo sapiens" mol_type="genomic DNA" 'db_xref="texon:9606" opin(521528,62806427,78078077,83718486,89569009)	Tel:81-75-753-437(ex.4371), Fax:81-75-753-4388) Location/Qualifiers 111204
Ş	Db QY) B &	}	B &	₹ Q	Ωy	Db QY	p &) B 8	?	₽ ₽) B Q	g dy	ρ <i>δ</i>	ος γ	B &	ඩ . හි	B &
2417 TGTAAAAGAGTTAAAAATTGTTACTTCATGTATTCATTTATATTTTATATTATTTTGCGT 2476	2357 AGATCCACAGGAAAACTTGAATGCACAACTGTCTTATTTTAATCTTATTGTACATAAGTT 2416 	TICKSHATIANCCATATICCCTISTICATIANT TACCTAGCAACCCTTGCAATGAAGATGAGC TICKSHATIANCCATATCCCTGCCGTTATTACCTAGCAACCCTTGCAATGAAGATGAGC TICKGAATAACCATATCCCTGCCGTTATTACCTAGCAACCCTTGCAATGAAGATGAGC TICKGAATAACCATATCCCTGCCAATGAAGATGAGC TICKGAATAACCATATCACTGCAATGAAGATGAGC TICKGAATAACCATATCACTGCAATGAAGATGAGC TICKGAATAACCATATCACTGCAATGAAGATGAGC TICKGAATAACCATATCACTGCAATGAAGATGAGC TICKGAATGAAGATGAGC TICKGAATGATGAAGATGAGAGC TICKGAATGAAGATGAGC TICKGAATGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGATGAAGAA	7 TATTIGICICTITIGGIGICTATITGICCTAACAACTGTCTTTGACAGGAGAAAAAAA 0 TATTIGICTCTTTTGGIGICTATITGICCCTAACAACTGTCTTTGACAGGAGAAAAATA 0 TATTIGICTCTTTTGGIGICTATITGICCCTAACAACTGTCTTTGACAGGAGAAAAATA	ABUCATTGUANGGAAATTGTGUTTTATCCAACAAAATGTAAGGAACCAATAAGGAATCCC AAGCATTGCAAGGAAATTGTGCTTTATCCAACAAAATGTAAGGAACCAATAAGGAATCCC AAGCATTGCAAGGAAATTGTGCTTTATCCAACAAAATGTAAGGAAGCCAATAAGGGATCCC	7 AAAAAAAAAAAAGGAGAGAGAGAGAAGAGAACAATATTTGGGAGAGAAGATGGGG 7 IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	7 AGCTGAGATGGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAGACTCTGTCTCAGAA	1997 AGCTACTTGGGAGGCYGAGGCAGGAGATCGCTTGAACCCAGGAGGTGGAGGTTGCAGTA 2056 	CCCCGTCTGTACTCAAAATGCAAAAATTAGCCAGGGTGGTAGCAGGCACCTGTAATCCC CCCCGTCTGTACTCAAAATGCAAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAATCCC	CGAGCCGGGCGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAAA CGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAAA CGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAAA	AGAAAGAGAGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	GTTCAAGGCCAGCCTGGGCAACATAACAAGATCCTGTCTCTCAAAAAAAA	ACACGCTCATAGTTCTAGCTGCTTGGGAGGTTGAGGAGGGAG	1637 GTATATTAACTATATAAGAGAGTTGTGACAAAACAGAATGATAAAGCTGCGAACCGTGGC 1696 	1577 GAAATGCCAATCAGGTCAAGGTTTGCTACATTTTGTATGTGTGTG	1517 AAGTIGCTTGAATGTIGGGGAAGAGAAAATCTATTGGCTCTCGTGGGTCTCTTCATCTCA 1576	1457 GTCCCTAATTTAGAAACACCCACAAACTTCACATATCATAACTAGCAAACAATTGGAAGG 1516 	97 TAATAATGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAACGCAAACTCTTTTAAGGAA	137

```
RESULT 6
AC092184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
Muzny, D. M., Adams, C., Adio-Oduola, B., Ali-osman, F.R., Allen, C., Alsbrooks, S.L., Amaratunge, H.C., Are, J.R., Ayele, M., Banks, T., Barbaria, J., Benton, J., Bimage, K., Blankenburg, K., Bonnin, D., Bouck, J., Bowle, S., Brieva, M., Brown, E., Brown, M., Bryant, N.P., Bouky, J., Bowle, S., Brieva, M., Brown, E., Brown, M., Bryant, N.P., Bouky, J., Bowle, S., Brieva, M., Brown, E., Brown, M., Bryant, N.P., Bouky, J., Burch, P., Burkett, C., Burrell, K.L., Byrd, N.C., Carron, T.F., Carter, M., Cavazos, S.R., Chocko, J., Chavez, D., Chen, G., Chen, R., Chen, Z., Chiu, D., Chowdhry, I., Christopoulos, C., Chen, R., Chen, R., Chen, R., Chen, R., Chen, R., David, R., Delaney, K.R., David, R., Ding, Y., Dinh, H.H., Douthwaite, K.J., Delagan, Rocha, S., Dubrin, K.J., Escotto, M., Falls, T., Ferraguto, D., Flagy, N., Ford, J., Foster, P., Frantz, P., Gabisi, A., Gao, J., Garcia, A., Garner, T., Garza, N., Frantz, P., Gabisi, A., Gao, J., Garcia, A., Garner, T., Garza, N., Hawes, A., Herrandez, J., Herrandez, J., Howard, S., Huber, J., Hulk, P., Hawes, A., Herrandez, J., Herrandez, J., Howard, S., Huber, J., Hulk, P., Hawes, A., Herrandez, J., Homsi, F., Howard, S., Huber, J., Hulk, S., Johnson, R., Jolivet, S., Joudah, S., Karlsson, E., Kelly, S., Khan, U., King, L., Kovar, C., Kratovic, J., Kureshi, A., Landry, N., Leal, B., Lee, B., Lewis, L.C., Lewis, L.J., Li, J., Li, Z., Lichtarge, O., Lieu, C., Liu, W., Loulseged, H., Lozado, R.J., Lu, X., Landry, N., Marcindal, A., Martinez, E., Massey, E., Metker, M., Martinez, E., Massey, E., Metker, M., Martinez, E., Massey, E., Metker, M., Martinez, E., Massey, E., Massey, E., Massey, E., Maschan, N., Nowon, G., Wersch, A., Porez, L., Petcers, L., Petcers, L., Petcers, L., Parcha, R., Portmus, E., Payton, B., Peery, J., Perez, L., Petcers, L., Petcers, L., Payton, B., Polites, M., Ren, Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             71132 bp DNA
Homo sapiens 12 BAC RP11-438L7 (Roswell Pa
BAC Library) complete sequence.
N AC092184 AC013443
AC092184.7 GI:23>>^~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATGATGGAATAAACTTGAGA 11130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATGATGGAATAAACTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGCTTCTGGCTCACTTTCAATCAGTTAAATAAATGATAAATTATTTTGGAAGCTGTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTCATAAATTTATAACTTTAGAAATGATTCTAATAACAACGTATGTAATTGTAACATTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTCATAAATTTATAACTTTAGAAATGATTCTAATAACAACGTATGTAATTGTAACATTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTAATGATTTTTTTAACATGATTTCCTTTTCTGATATTGAAATGGAGTCTCAAAGC 2536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATAAAATACCAAATAAAATAATATAAAAGTGATTTATATGAAGTTAAAATAAAAATCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGTAATGGTGCTACGAAGCCATTTCTCTTGATTTTTAGTAAACTTTTATGACAGCAAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGTAATGGTGCTACGAAGCCATTTCTCTTGATTTTTAGTAAACTTTTATGACAGCAAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTAATGATTTTTATTAACATGATTTCCTTTTTCTGATATATTGAAATGGAGTCTCAAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (bases 1 to 71132)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Park Cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Institute Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2776
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10809
```

S 밁 Ś 밁 δÃ 밁 S 밁 S 밁 Ś 밁

```
Submitted (12-JUN-2002) Human Genome Sequencing Center, Dep of Molecular and Human Genetics, Baylor College of Medicine Baylor Plazz, Houston, TX 77030, USA On May 25, 2002 this sequence version replaced gi:20901754. INFORMATION: http://www.hgsc.bcm.tmc.edu/ or email gc-help@bcm.tmc.edu
                                                                                                                                                                                                                                                                                                                                                                                                          Worley, K.C.
Direct Subm
                                                                                                                                                                        Direct Submission Submitted (12-JUN
                                                                                                                                                                                                                                                                 Direct Submission
Submitted (25-MAY-2002) Human Genome Sequencing of Molecular and Human Genetics, Baylor College Baylor Plaza, Houston, TX 77030, USA (bases 1 to 71132)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (18-MAY-2002)
of Molecular and Human G
Baylor Plaza, Houston, T
4 (bases 1 to 71132)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Worley,K.C.

Direct Submission

Submitted (25-UN-2001) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA

3 (bases 1 to 71132)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rives, M., Rojas, A., Rojubokan, I., Rolfe, M., Ruiz, S., Savery, G., Scherer, S., Scott, G., Shen, H., Shim, C., Shooshtari, N., Sisson, I., Sodergren, E., Sonaike, T., Sparks, A., Stanley, H., Stone, H., Sutton, A., Svarek, A., Tabor, P., Tamerisa, A., Tamerisa, K., Thomas, N., Tansey, J., Taylor, C., Taylor, T., Telirod, B., Thomas, N., Thomas, S., Usmani, K., Vasquez, L., Vera, V., Villalon, D., Vinson, R., Wang, Q., Walliamson, S., Ward-Moore, S., Warren, R., Washington, C., Watlington, S., Williams, G., Williamson, A., Wleczyk, R., Wooden, S., Worley, K., Wu, C., Wu, Y., Wi, Y.F., Zhou, J., Zorrilla, S., Kucherlapati, R., Weinstock, G., and Gibbs, R.
                                                                                                                                                                                                                                     Worley, K.C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Worley, K.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 71132)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 71132)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human Genome Sequencing
Genetics, Baylor College
TX 77030, USA
                                                                                                                           Center, Department of Medicine, One
                                                                                                                                                                                                                                                                                                                                         Center, Department of Medicine, One
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Center, Department
of Medicine, One
```

REFERENCE AUTHORS TITLE

JOURNAL

TITLE JOURNAL REFERENCE

AUTHORS TITLE JOURNAL

COMMENT

REFERENCE AUTHORS

TITLE JOURNAL

REFERENCE AUTHORS TITLE JOURNAL

CLONE LENGTH: This sequence does not necessarily represent the entire insert of this clone. Overlapping regions of clones are only sequenced and submitted once, so the sequence for the remainder of the insert may be found in the record for the adjacent clones. Overlapping clones are noted at the beginning and end of the reatures listing.

ANNOTATION OF FEATURES:

STSs are identified using ePCR (Genome Res. 7:541-550) searches of a local database that includes entries from dbSTS, GDB, and local mapping efforts.

Repeats are identified using RepeatMasker (A. Smit and P. Green, unpublished.) for Human and Mouse sequences.

Genes and Region of sequence similarity are identified by BLAST (Nuc. Acids Res. 25:3389-3402) similarity (expect < 1e-34) to the EST and cDNA sequences. Genes demonstrate at least two exons flanked by consensus splice sites that maintained sequence continuity across the splice junctions. Sequences that are not dentical matches are annotated as similar.

SEQUENCING READ COVERAGE: Sequencing is completed to a minimum standbard of double strand coverage with a minimum of 2 clones and 2 reads with no ambiguities or 2 chemistries with a minimum of 2 clones and 3 reads with no ambiguities. If the sequence quality for a region does not meet this standard, it will be indicated in the annotation as Low Coverage.

QUALITY OF INDIVIDUAL BASES: This sequence meets stringent quality standards - estimated error rate less than 1 mer 10,000 bases. Reports of lowest quality individual bases and measures of base quality are listed below. Description of the metrics can be found quality are at URL:

.edu:8088/quality.info/genbank.annotation.html

```
STS
                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                          repeat_region
                                                                                                                                             repeat_region
                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                   repeat_region
                                                                                                                                                                            repeat_region
                                                                                                                                                                                                         repeat_region
repeat_region
                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QUALSTAT-REPORT.
                                                     /rpt family="AluSg"
complement(11227. .12175)
/rpt family="rrR5"
,12625. .12000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone="RP11-438L7"
complement(1. .1448)
/note="overlaps bases 1. ...
/function="clone overlap"
187. .408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /rpt_family="(TTTC)n"
4097. .4240
                                                                                                                                                /rpt_8567.
             /standard_name="87432"
complement(13547. .13664)
/rpt_family="L1MB5"
                                                                                                                                                           complement (8050. .8549)
/rpt_family="LTR47A"
                                                                                                                                                                                                                                                                                 complement(6711. .6817)
/rpt_family="MIR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /rpt
complement (13665. .13979)
                                                                                                                   /rpt_family="MIR" complement(8815. .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                jąr/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    jąr/
                                                                                                                                                                                             ž
Į
                                                                                                                                                                                                                        'zăr'
                                                                                                                                                                                                                                                     쳪
                                                                                                                                                                                                                                                                                                                ή
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rpt_family="MIR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          organism="Homo sapiens"
mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       standard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rpt_family="AluSq"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   standard_name="92005"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                standard_name="57233"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               db_xref="taxon:9606"
chromosome="12"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ocation/Qualifiers,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    standard_name="6612"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rpt_family="AT_rich'
591. .1807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            _family="AluSq"
                                                                                                                                                                                                                                                 _family="Alusx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  family="Aluy"
lement(5140. .5262)
family="FLAM_C"
                                                                                                                                                                                                                    _family="FLAM_A"
                                                                                                                                                                                                                                                                                                                                          _family="MSTD"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       _family="AluSq"
                                                                                                                                                                                                                                                                                                                                                                       _family="AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                    _family="AluSq"
                                                                                                                                                                                                                                                                                                                                                                                                                                  _family="MSTD"
                                                                                                                                                                                                                                                                                                                                                                                                                                                             _family="AT_rich"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      _family="AT_rich'
                                                                                                                                                                                           family="MIR"
                                                                                                                                                                                                                                                                     lement (7033.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           _family="AluJo"
                                                                                                                                                                                                                                                                                                              family="(CAA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .
88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       _name="8198"
                                                                                                                                                                                                                                                                   .7327)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .1448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   G
H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   clone AC092490"
                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
S
                             밁
                                                     8
                                                                                      밁
                                                                                                                Š
                                                                                                                                              밁
                                                                                                                                                                          S
                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                      $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 77.2%;
Best Local Similarity 99.8%;
Matches 2177; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    43733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             43493
                                                                                                                                                                                                                                                                   44033
                                                                                                                                                                                                                                                                                                                              43973
                                                                                                                                                                                                                                                                                                                                                                                        43913
                                                                                                                                                                                                                                                                                                                                                                                                                                                 43853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           43793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  43553
                                                                                      44213
                                                                                                                                                44153
                                                                                                                                                                                                         44093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         43613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               43673
 1457
                                                                                                                   1337
                                                                                                                                                                                                                                      1217
                                                                                                                                                                                                                                                                                                 1157
                                                                                                                                                                                                                                                                                                                                                           1097
                                                                                                                                                                                                                                                                                                                                                                                                                    1037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            797
GTCCCTAATTTAGAAACACCCACAAACTTCACATATCATAATTAGCAAACAATTGGAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTTTTGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACAGGTCTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGCAACATTGTCCCCTA 43792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAAAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAAAATAGAGAAGGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AACAGTCCTTCAAGTCTTCTCTGTTTTTATTCTTCAACTCTCACTTTCTTAGAGTTTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AACAGTCCTTCAAGTCTTCTCTGTTTTTTTTCTTCAACTCTCACTTTCTTAGAGTTTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTACAGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTGA
                                                                                                                                                                                                                           TCCAAAGCATTAATATCCAATCATGCGCTGTATGTTTTAATCAGCAGAAGCATGTTTTTA
                                                                                                                                                                                                                                                                                       CCATGATCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTGACCCCAAACCATCTC
                                                                                                                                                                                                                                                                                                                              GATTTTTCTATTCTTTTCCCTTGACGTTTACTTTCAAGTAACACAAACTCTTCCATCAGG
                                                                                                                                                                                                                                                                                                                                                  GATTTTTCTATTTTTCCCTTGACGTTTACTTTCAAGTAACACAAACTCTTCCATCAGG
                                                                                                                                                                                                                                                                                                                                                                                                        TTTTTATATCAACATCCTTTATTTGATTCATTTGAGTTTAACAGTGGTGTTAGTGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTTTTAGGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCATGGTGAGAGGATCAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTTTTAGGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCATGGTGAGAGGATCAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCAACGTTTTTCTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCAACGTTTTTCTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACAGGTCTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGCAACATTGTCCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAAA 736
                             TAATAATGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAACGCAAACTCTTTTAAGGAA
                                                                                                                                                                 CCATGATCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTGACCCCCAAACCATCTC
                                                                                                                                                                                                                                                                                                                                                                                        TTTTTATATCAACATCCTTTATTATTTGATTCATTTGAGTTAACAGTGGTGATTAGTGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAAAAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAAAATAGAGAAGGAAC
                                                        TAATAATGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAACGCAAACTCTTTTAAGGAA 1456
                                                                                      CTTCAAGCTACTTTAATAAAGGATCTTAAAATGGGCAGGAGGACTGTGAACAAGACACCC
                                                                                                                   CTTCAAGCTACTTTAATAAAGGATCTTAAAATGGGCAGGAGGACTGTGAACAAGACACCC
                                                                                                                                                                                                          TCCAAAGCATTAATATCCAATCATGCGCTGTATGTTTTAATCAGCAGAAGCATGTTTTTA
                                                                                                                                                /rpt_family="L1PA8"
complement(17272. .17395)
/rpt_family="FLAM_C"
17426_ .17575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /rpt_family="AluY"
complement(13980. .14193)
/rpt_family="L1MB5"
14622. .14924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /rpt_family="AluY"
complement(15813.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /rpt_family="MIR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 2174.6;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 71132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  43612
                                                                                                                                                                             1336
                                                                                                                                                                                                                                                                                                                                                                                        43972
                                                                                                                                                                                                                                                                                                                                                                                                                    1096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      796
1516
                             44332
                                                                                                                    1396
                                                                                                                                                                                                         44152
                                                                                                                                                                                                                                      1276
                                                                                                                                                                                                                                                                                                 1216
                                                                                                                                                                                                                                                                                                                              44032
                                                                                                                                                                                                                                                                                                                                                           1156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           43852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             43552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          676
                                                                                       44272
                                                                                                                                                44212
                                                                                                                                                                                                                                                                     44092
                                                                                                                                                                                                                                                                                                                                                                                                                                                   43912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               43732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         43672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
S
                                     В
                                                            Ś
                                                                                                                                                          8
                                                                                      닭
                                                                                                          Ş
                                                                                                                              g
                                                                                                                                                                                    밁
                                                                                                                                                                                                                                  문
                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                 よ
                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       문
                                                                                                                                    45233
                                         45353
                                                                                                                                                                                    45173
                                                                                                                                                                                                                                   45113
                                                                                                                                                                                                                                                                                                                                                                               44933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           44693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         44573
                                                                                                                                                                                                                                                                                  45053
                                                                                                                                                                                                                                                                                                                                 44993
                 2537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              44813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          44633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         44513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        44453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1637
TTCATAAATTTATAACTTTAGAAATGATTCTAATAACAACGTATGTAACTAGTGTAACTTGC
                                                    CTAATGATTTTTTAATTAACATGATTTCCTTTTCTGATATATTTGAAATGGAGTCTCAAAGC
                                      CTAATGATTTTTATTAACATGATTTCCTTTTCTGATATTTGAAATGGAGTCTCAAAGC
                                                                                   TGTAAAAGAGTTAAAAATTGTTACTTCATGTATTCATTTATATTTTATATTTTTGCGT
                                                                                                                                                      AGATCCACAGGAAAACTTGAATGCACAACTGTCTTATTTTAATCTTATTGTACATAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGTAAAAGAGTTAAAAATTGTTACTTCATGTATTCATTTATATTTTATATTTTGCGT
                                                                                                                                   AGATCCACAGGAAAACTTGAATGCACAACTGTCTTATTTTAATCTTATTGTACATAAGTT
                                                                                                                                                                                  TTCAGAATAACCATATCCCTGTGCCGTTATTACCTAGCAACCCTTGCAATGAAGATGAGC
                                                                                                                                                                                                                                                   TATTIGTCTCTTTTGGTGTCTATTTGTCCCTAACAACTGTCTTTGACAGTGAGAAAAATA 2296
                                                                                                                                                                                                                                                                                                                                           AGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGAAGAGCAAGACTCTGTGTCTCAGAA 2116
                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGAGGTGGAGGTTGCAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGAAAGAGAGAGGCCGGGCGTGGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAGTTGCTTGAATGTTGGGGAGAGAAAATCTATTGGCTCTCGTGGGTCTCTTCATCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAGTTGCTTGAATGTTGGGGAGAGGAAAATCTATTGGCTCTCGIGGGTCTCTTCATCTCA
                                                                                                                                                                                                         TTCAGAATAACCATATCCCTGTGCCGTTATTACCTAGCAACCCTTGCAATGAAGATGAGC
                                                                                                                                                                                                                                                                              AAGCATTGCAAGGAAATTGTGCTTTATCCAACAAAATGTAAGGAGCCAATAAGGATCCC
                                                                                                                                                                                                                                                                                                     AAGCATTGCAAGGAAATTGTGCTTTATCCAACAAAATGTAAGGAGCCAATAAGGGATCCC
                                                                                                                                                                                                                                                                                                                                                                             AGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAGACTCTGTCTCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                           AGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCCAGGAGGTGGAGGTTGCAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCCCGTCTGTACTCAAAATGCAAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAGAAAGAGAGAGGGCCGGGCTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTATATTAACTATATAAGAGAGTTGTGACAAAACAGAATGATAAAGCTGCGAACCGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACACGCTCATAGTTCTAGCTGCTTGGGAGGTTGAGGAGGAGGATGGCTTGAACACAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTATATTAACTATATAAGAGAGTTGTGACAAAACAGAATGATAAAGCTGCGAACCGTGGC
                                                                                                         2476
                                                                                                                                                                                                      2356
                                                            2536
                                                                                                                                                           2416
             2596
                                                                                                                                                                                                                                45172
                                      45412
                                                                                                                                                                                 45232
                                                                                                                                                                                                                                                                              45112
                                                                                                                                                                                                                                                                                                                              45052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         44812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1576
                                                                                    45352
                                                                                                                                   45292
                                                                                                                                                                                                                                                                                                                                                                             44992
                                                                                                                                                                                                                                                                                                                                                                                                                            44932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           44872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        44752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        44697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    44572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                44392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       44632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    44512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   44452
                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 7
BD016840
LOCUS
  밁
                                               皮
                                                                    δ
                                                                                             멼
                                                                                                                 S
                                                                                                                                            맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뭉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              45533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                45593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             45473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            45413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2597
                                                                                                                                                                                            2172;
                        803
                                                121
                                                                      743
                                                                                                                      683
                                                                                                                                                                     623
  181
                                                                                               13
                                                                                                                                                                                                                                                                                                                꿒
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates; 1 (bases 1 to 2172)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BD016840.1 GI:22558016
JP 2001245669-A/13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BD016840
Novel cytidine deaminase
BD016840
                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens (human)
                  ATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAAAATAGAGAAGGAACACAGGT
                                                           CCTTCAAGTCTTCTGTTTTTATTCTTCAACTCTCACTTTCTTAGAGTTTACAGAAAAA
                                                                                                            CTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAAAAACAGT
                                                                                             CTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAAAAAACAGT
                                                                                                                                           CCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGGACTTTGATAGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATGATGGAATAAACTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TATGATGGAATAAACTTGAGA
                                                                                                                                                                                           77.1%;
ilarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                         Score 2172; D;
; Pred. No. 0;
0; Mismatches
                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                45673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    đđ
                                                                                                                                                                                                                 BB
```

```
TTCATAAATTTATAACTTTAGAAATGATTCTAATAACAACGTATGTAATTGTAACATTGC
ATAAAATACCAAATAAAATAATAAAAGTGATTTATATGAAGTTAAAATAAAAATCAG
                                  АТАРАБТАССАРАТАРАТАТАРАРАСТGATTTATATGAAGTTAPAPATAPAPATCAG
                                                                                                        AGTAATGGTGCTACGAAGCCATTTCTCTTGATTTTTAGTAAACTTTTATGACAGCAAATT
                                                                                                                                                                                       AGTAATGGTGCTACGAAGCCATTTCTCTTGATTTTTAGTAAACTTTTATGACAGCAAATT
                                                                               45652
                                      2776
                                                                               45592
                                                                                                                     2716
                                                                                                                                                              45532
                                                                                                                                                                                                      2656
                                                                                                                                                                                                                                               45472
```

Honjo,T. and Muramatsu,M.

Novel cytidine deaminase
Patent: JP 2001245669-A 13 11-SEP-2001;
JAPAN TOBACCO INC,TASUKU HONJO
OS Homo sapiens (human)
PN JP 2001245669-A/13
PD 11-SEP-2001
PT TASUKU HONJO,MASAMICHI MURAMATSU
PC C12N15/09,A61K39/395,A61K39/395,A61P1/00,A61P11/06,A61P13/12,
PC A61P17/00,
A61P27/02,A61P27/16,A61P37/02,A61P37/08,C07K16/18,C12N1/19, PC C12N1/21, C C12N5/10,C12N9/78,C12P21/02,C12P21/08//(C12N1/21,C12R1:19), (C12N5/10,C12R1:91),C12N15/00,C12N5/00,(C12N5/00,C12R1:91) CC H Key Logation/Qualifiers. Craniata; Vertebrata; Catarrhini; Hominidae; DNA linear Euteleostomi; Homo. PAT 27-AUG-2002 Ö

CCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTTGATAGCAA 6, 0 Length Indels 2172; 0 Gaps

862 180 802 120

240

60

682

0

g

1763 GGCCAGCCTGGGCAACATAACAAGATCCTGTCTCTCAAAAAAAA	241 CUGGCCAGGGAACTGCTALTTGGTGCAGGTTTTTALTGCAACATTTTTCTACGGGAACTGCTACTGGGA 241 CUGGCCAGGAACTGCGGAACCTTGGAACCATCTTTTALTGCAACATTTTTCTACGCTACTGGGA 252 ATAACAGAACTGCAGGACCTGGGAACCATCCTAAAAGCATCTAACTTTTCTATTTCTATTTTTTTT
RESULT 8 BC006296 BC006296 BC006296 COURS BC006296 DEFINITION Homo sapiens activation-induced cytidine deaminase, mRNA (cDNA clone MGC:12911 IMAGS:4054915), complete cds. ACCESSION BC006296 VERSION BC006296.2 GI:33871601 KEYMORDS MGC. SOURCE Homo sapiens CARANISM Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.	Qy 1943 CTGTACTCAMATGCAMATTAGCONGGCGTGGTAGCAGGCACCTGTATCCCAGCTAC Db 1221 CTGGACTCAMATGCAMATTAGCAMATTAGCAGGCACCTGTATCCCAGCTAC Db 1221 CTGGACTCAMATGCAMATTAGCAMATTAGCAGGCACCTGTATACCCAGCTAC Dc 2003 TTGGGAGGCTGGAGCAGGAGAAATTAGCATGCAGGCACCTGTAGAGCACCAGCTAC Dc 1181 TTGGGAGGCTGGAGCAGGAGAAATTAGCAGGCACCAGGAGCACCAGCTAC Dc 1181 TTGGGAGGCTGGAGCAGGAGAAATTAGCAGGCACCAGGAGCACCAGCTAC Dc 1222 AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

S

 Ś

음 성

뮍

片

밁 S 뮍 Ś 밁 Ś 밁 Ş 밁 Ś 뭐 Š В Ś g Ś В 5 밁 Ś

```
PUBMED
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                  Sg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CE 1 (bases 1 to 1828)

RS Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,
Klausner, R.D., Collins, F.S., Wagner, L., Shemmen, C.M., Schuler, G.D.,
Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,
Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,
Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,
Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,
Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,
Willalon, D.K., Mazay, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,
Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodriques, S.,
Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodriques, S.,
Butfard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,
Dickson, M.C., Rodriquez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,
Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E.,
Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A.
Generation and initial analysis of more than 15,000 full-length
human and mouse cDNA sequences
Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Web site: http://www.nisc.nih.gov/
Contact: nisc_mgc@nhgri.nih.gov
Akhter,N., Ayele,K., Beckstrom-Sternberg,S.M., Benjamin,B.,
Blakesley,R.W., Bouffard,G.G., Breen,K., Brinkley,C., Brooks,S.,
Blakesley,R.W., Bouffard,G.G., Breen,K., Gupta,J., Haghighi,P.,
Dietrich,N.L., Granite,S., Guan,X., Gupta,J., Haghighi,P.,
Hansen,N., Ho,S.-L., Karlins, E., Kwong,P., Learic,P., Legaspi,R.,
Hansen,N., Ho,S.-L., Karlins, E., Kwong,P., Laric,P., Legaspi,R.,
Maduro,Q.L., Masiello,C., Maakeri,B., Mastrian,S.D.,McCloskey,J.C.,
McDowell,J., Pearson,R., Stantripop,S., Thomas,P.J., Touchman,J.W.,
Tsurgeon,C., Vogt,J.L., Walker,M.A., Wetherby,K.D., Wiggins,L.,
                                                                                                                                                                                                                                                                                                                                                                                                              Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consorthum/LLNL at: http://image.llnl.gov Series: IRAL Plate: 17 Row: a Column: 1
This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 10190699.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Louis Staudt
CDNA Library Preparation: Rubin Laboratory
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: National Institutes of Health Intramural
Sequencing Center (NISC),
Gaithersburg, Maryland;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NIH-MGC Project URL: http://mgc.nci.nih.gov
On Aug 19, 2003 this sequence version replaced gi:13623400
Contact: MGC help desk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (09-APR-2001) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Strausberg, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (bases 1
             /gene="AICDA"
/note="synonyms: AID, HIGM2, CDA2, ARP2"
/db_xref="LocusID:57379"
/db_xref="MIM:605257"
77._.673
                                                                                                                                                                                   /db_xref="taxon:9606"
/clone="MGC:12911 IMAGB:4054915"
/tissue_type="Primary B-Cells fx/
/clone_Tib="NH_MGC_48"
/lab_host="DH10B-R"
                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                organism="Homo sapiens"
|mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Zhang, L.-H. and Green, E.D.
                                                                                                                                                              note="Vector:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         to 1828)
                                                                                                                                               1828
                                                                                                                                                                                                                                          from Tonsils"
                                                                                     맑
                                                                                                                               Ś
                                                                                                                                                                                 맑
                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                         문
                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             皮
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches 1821;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                     781
                                                                                                                                                                                      721
                                                                                                                                                                                                                                     724
                                                                                                                                                                                                                                                                                      661
                                                                                                                                                                                                                                                                                                                                     664
                                                                                                                                                                                                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                                                                                                                                                                           604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                  784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
ATAGAGAAGGAACACAGGTCTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGCA
                                                                                                                                                                                                                   ACAGTGGATAAAAAACAGTCCTTCAAGTCTTCTCTGTTTTTTATTCTTCAACTCTCACTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AATAGCCATCATGACCTTCAAAGATTATTTTTACTGCTGGAATACTTTTGTAGAAAACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTACCGCGTCACCTGGTTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCCGACATGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                      GCTTCGGCGCATCCTTTTGCCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTTAGAGTTTACAGAAAAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAAA
                                                                                                                                                                                                                                                                                                                                     TTTGGGACTTTGATAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGAAAGAACTTTCAAAGCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTCTCCAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGAAAGAACTTTCAAAGCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTCCCAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGTGAGGACCGCAAGGCTGAGCCCGAGGGGCTGCGGCGGCTGCACCGCCGCGGGGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGACTTTCTGCGAGGGAACCCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCTCTACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTACCGCGTCACCTGGTTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        64.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 1818.6;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB
```

783

720 723 660 663 600 603 540 543 480 483 420 423 360 363

903 840 843 780

184 GCGTGACAGTGCTACATCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGGCTG 64 CACTCTGGACACCACTATGGACAGCCTCTTGATGAACCGGAGGAAGTTTTCTTTACCAATT 4 GAACCATCATTAATTGAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGGAGGCAAGAAGA CCACGTGGAATTGCTCTTCCTCCGCTACATCTCGGACTGGGACCTAGACCCTGGCCGCTG CACTCTGGACACCATGTGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAATT GAACCATCATTAATTGAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGGAAGGCAAGAAGA GCGTGACAGTGCTACATCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGGCTG /codon_start=1
/product="activation-induced cytidine deaminase"
/protein id="aAN06296.1"
/db_xref="GI:13623401"
/db_xref="LocusID:57379"
/db_xref="LocusID:57379"
/db_xref="LocusID:57379"
/tanslation="MDSLIAMRRKFLYQFKNVRWAKGRRETYLCYVVKRRDSATSFSL_
DFGYLENKNGCHVELLFLRYISDWDLDPGRCYRVTWFTSWSPCYDCARHVADFLRGNP
NLSLRIFTARLYFCEDRKAEPEGLRRLHRAGVQIAIMTFKDYFYCWNTFVENHERTFK
AWEGLHENSVRUSRQLRRILLPLYEVDDLRDAFRTLGL" 4. Indels Length 0; Gaps 300 303 240 243 180 183 120 123 60 0

```
RESULT 9
BD016828
LOCUS
DEFINITION
ACCESSION
VERSION
                                                                                                                                                                            δ
                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                      멂
                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Дò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                     뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                     1801
                                                                                                                                                                                                                                                              1744
                                                                                                                                                                                                                                                                                                  1681
                                                                                                                                                                                                                                                                                                                                      1684
                                                                                                                                                                                                                                                                                                                                                                          1621
                                                                                                                                                                                                                                                                                                                                                                                                            1624
                                                                                                                                                                                                                                                                                                                                                                                                                                                1561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            841
   BD016828
Novel cytidine d
BD016828
BD016828.1 GI:2
                                                                                                                                                                                                                                                  CTTGAACACAGGTGTTCCAAGGCCAGCCTGGGCAACATAACAAGATCCTGTCTCTCAAAAA
                                                                                                                                                                                                                                                                                              GCTTCTCCCAAAGGTATATTAACTATATAAGAGAGTTGTGACAAAACAGAATGATAAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                             CTCTTTTAAGGAAGTCCCCTAATTTAGAAACACCCCACAAACTTCACATATCATTAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAACAAGACACCCTAATAATGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAACGCAAA 1443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CATGCATGGTCACCTTCAAGCTACTTTAATAAAGGATCTTAAAAATGGGCAGGAGGACTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCCAAACCATCTCTCCAAAGCATTAATATCCAATCATGCGCTGTATGTTTTAATCAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGAGGATCAAATGTTTTTATATCAACATCCTTTATTATTTGATTCATTTGAGTTAACAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACATTGTCCCCTACTGGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCAA
                                                                                                                                                     GCTTCTCCCAAAGGTATATTAACTATATAAGAGAGTTGTGACAAAACAGAATGATAAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AACAATTGGAAGGAAGTTGCTTGAATGTTGGGGAGAGGAAAATCTATTGGCTCTCGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AACAATTGGAAGGAAGTTGCTTGAATGTTGGGGAGAGGAAAAATCTATTGGCTCTCGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAACAAGACACCCTAATAATGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAACGCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CATGCATGGTCACCTTCAAGCTACTTTAATAAAAGGATCTTAAAATGGGCAGGAGGACTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTCTTCCATCAGGCCATGATCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGTGTTAGTGATAGATTTTTTCTATTCTTTTCCCTTGACGTTTACTTTCAAGTAACACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGTTTTTCTATGACTTTTAGGTAGGATGAGAGGAAGGTAGATCCTAAAAAAGCATGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACATTGTCCCCTACTGGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCCAA
                                                                                                                                                                                      AAAAAAAAAAAAAAGAAAGAGAGA
                                                                                                                                                                                                                          CTTGAACACAGGTGTTCAAGGCCAGCCTGGGCAACATAACAAGATCCTGTCTCAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTCTTTTAAGGAAGTCCCTAATTTAGAAACACCCACAAACTTCACATATCATAATTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCCAAACCATCTCTCCAAAGCATTAATATCCAATCATGCGCTGTATGTTTTAATCAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTCTTCCATCAGGCCATGATCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGTGTTAGTGATAGATTTTTCTATTCTTTTCCCTTGACGTTTACTTTCAAGTAACACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGAGGATCAAATGTTTTTATATCAACATCCTTTATTATTTGATTCATTTGAGTTAACAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGTTTTTCTATGACTTTTAGGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCATGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATAGAGAAGGAACACAGGTCTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGCA
   GI:22558004
                                         deaminase
                                                        2440
                                                                                                                                                    1825
                                                                                                                                                                                      1828
                                                        đđ
                                                        DNA
                                                        linear
                                                        PAT
                                                       27-AUG-2002
                                                                                                                                                                                                                        1800
                                                                                                                                                                                                                                                          1803
                                                                                                                                                                                                                                                                                                                                1743
                                                                                                                                                                                                                                                                                                                                                                                                       1683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1323
                                                                                                                                                                                                                                                                                              1740
                                                                                                                                                                                                                                                                                                                                                                      1680
                                                                                                                                                                                                                                                                                                                                                                                                                                             1620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
SOURCE
ORGANISM
ð
                                    밁
                                                                S
                                                                                                밁
                                                                                                                                    S
                                                                                                                                                                                  B
                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                        $
                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                       맑
                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 1006; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel cytidine deaminase
Patent: JP 2001245669-A 1 11-SEP-2001;
PARAN TOBACCO INC, TASUKU HONJO
OS Mus musculis (mouse)
PD 11-SEP-2001
PP 200124569-A/1
PP 28-MAR-2000 JP 2000092981
PF 28-MAR-2000 JP 200092981
PF 28-MAR-2000 JP 2000092981
PF 28-MAR-
                                     496
                                                                        483
                                                                                                          436
                                                                                                                                              423
                                                                                                                                                                                    376
                                                                                                                                                                                                                      363
                                                                                                                                                                                                                                                          316
                                                                                                                                                                                                                                                                                              303
                                                                                                                                                                                                                                                                                                                                                                                                       196
                                                                                                                                                                                                                                                                                                                                                                                                                                             183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 136
                                                                                                                                                                                                                                                                                                                                256
                                                                                                                                                                                                                                                                                                                                                                    243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa;
Mammalia; Eutheria;
1 (bases 1 to 2440)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JP 2001245669-A/1.
Mus musculus (house
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Honjo, T. and Muramatsu, M.
                                                                                                                                                                                                           CCGACTTTCTGCGAGGGAACCCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCCCTACT
                                                                                                                                                                                                                                                                               GCTACCGCGTCACCTGGTTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGTGG
                                                                                                                                                                                                                                                                                                                                                               GCCACGIGGAAITGCTCTTCCTCCGCTACATCTCGGACTGGGACCTAGACCCTGGCCGCT
ATGAAAGAACTTTCAAAGCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTCTCCAGAC
                                                            AAATAGCCATCATGACCTTCAAAGATTATTTTTACTGCTGGAATACTTTTGTAGAAAACC
                                                                                                          TCTGTGAAGACCGCAAGGCTGAGCCTGAGGGGCTGCGAGACTGCACCGCGCTGGGGTCC
                                                                                                                                 CTGAGTTTCTGAGATGGAACCCTAACCTCAGCCTGAGGATTTTCACCGCGCGCCTCTACT
                                                                                                                                                                                                                                                          GTTACCGCGTCACCTGGTTCACCTCCTGGAGCCCGTGCTATGACTGTGCCCCGGCACGTGG
                                                                                                                                                                                                                                                                                                                                GCCACGTGGAATTGTTCCTACGCTACATCTCAGACTGGGACCTGGACCCGGGCCGGT
                                                                                                                                                                                                                                                                                                                                                                                                        GGAGAGATAGTGCCACCTCCTGCTCACTGGACTTCGGCCACCTTCGCAACAAGTCTGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                       GGCGTGACAGTGCTACATCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCACGCTGGAGACCGATATGGACAGCCTTCTGATGAAGCAAAAGAAGTTTCTTTACCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACACTCTGGACACCACTATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAAGCAGCCTTGCTTGAAGCAAGCTTCCTTTGGCCTAAGACTTTGAGGGAGTCAAGAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAACCATCATTAATTGAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGGAAGGCAAG-AAG
                                    AGATCGGGÁTCATGACCTTCANAGACTATTTTTACTGCTGGAATACATTTGTAGAAAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21.4%;
ilarity 69.4%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11-SEP-2001
28-MAR-2000 JP 2000092981
Z8-MAR-2000 JP 2000092981
TASUKU HONJO, MASAMICHI MURAMATSU
C12N15/09, A61K39/395, A61K39/395, A61P1/00, A61P11/06, A61P13/12,
A61P17/00,
A61P27/02, A61P27/16, A61P37/02, A61P37/08, C07K16/18, C12N1/19, P0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5/10,C12R1:91),C12N15/00,C12N5/00,C

Cocation/Qualifiers

(29)...(689)

TR (1)...(92)

UTR (690)...(2440).

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Mus musculus'
/mol_type="genomic DNA"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chordata; Craniata; Vertebrata; Euteleostomi; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 603.4; DB 6; Pred. No. 6.4e-108; 0; Mismatches 351;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       92;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus.
                                                                      542
602
                                    555
                                                                                                          495
                                                                                                                                              482
                                                                                                                                                                                  435
                                                                                                                                                                                                                      422
                                                                                                                                                                                                                                                        375
                                                                                                                                                                                                                                                                                              362
                                                                                                                                                                                                                                                                                                                              315
                                                                                                                                                                                                                                                                                                                                                                  302
                                                                                                                                                                                                                                                                                                                                                                                                       255
                                                                                                                                                                                                                                                                                                                                                                                                                                             242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PC
```

밁

```
RESULT 10
AF132979
LOCUS
 ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                1322
                                                                                                                                                                                                                                                                                                                                                             1192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1085
                                                                                                                                                                                                        1442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      55
6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            723
                                              Mus musculus complete cds. AF132979
Mus
                                AF132979.1
                                                                                            AF132979
                                                                                                                                                                                           AACTCTTTT
                                                                                                                                                                                                                                   ACGAAGAAATCACTCTGAAAATGAGTTCACGCCTCAAGAAGCAAATCCCCCTGGAAAACACA
                                                                                                                                                                                                                                                                                                                   ACCATGCATGGTCACCTTCAAGCTACTTTAATAAGGATCTTAAAATGGGCAGGAGGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCCCAAACCATCTCTCCAAAGCATTAATATCCAATCATGCGCTGTATGTTTTAATCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTGGTGTTAGTGATAGATTTTTCTATTCTTTTCCCTTGACGTTTACTTTCAAGTAACACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGTTGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AACTTCGGCGCATCCTTTTGCCCTTGTACGAAGTCGATGACTTGCGAGATGCATTTCGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGAAAGAACTTTCAAAGCCTGGGAAGGCTACATGAAAATTCTGTCCGGCTAACCAGAC
                                                                                                                                                                                                                                                              GTGAACAAGACACCCTAATAATGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAACGCA
                                                                                                                                                                                                                                                                                                AGAATGCACGATCGCCTCTGGGTGATTTCAATAAAGGATCTTAAAATGCAGATGAGGACT
                                                                                                                                                                                                                                                                                                                                                                                       AACTCTTCCATCAGGCCATGATCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGGGTATCAGTGACGGATTCTTCTATTCTTTTCCCTCTAAGGCTCACTTTCAGG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGAGACGACACACTTTGTTACACCCACCCTGTGTTCCTTGATTCATTTGAATTCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGAGAGGATCAAATGTTTTTATATCAACATCCTTTATTATTTGATTCATTTGAGTTAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTTTTTTCAACAGCAT---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AACATCGCCATCTACTGGGAACAGCATAACTTCCAGACTTTGGGTCGTGAATGATGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTTTGGGACTTTGATAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCTTCGGCGCATCCTTTTGCCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTA
                                                                                                                                                                                                                                                                                                                                                          -----CTGTCCGTCGTGTTTTTCACATTTGTATGTGAAAGGGCTTGGGGTGGGATTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AACGTTTTTCTATGACTTTTAGGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AACATTGTCCCCTACT-GGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGGACCGCCAGAGCAATGATGTAAC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AATAGAGAAGGAACACAGGTCTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTATAAGTGTAGGGGGAAA-----TTATATGACTTTTTAAAAAAATACTTGAGCTGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCTTAGAGTTTACAGAAAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGACTGGATAGAAAAACAACCCTTCA--ACTACATGTTTTTCTTCTTAAGTACTCACTT
                                                                                                                                                                                                                                                                                                                                                                                                                        - CACAAGCCATTCTCTCAAAAACATTAATACTCAGGCACATGCTGTATGTTTTCA----
 musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1450
                                                                                                                                                                        1374
                                 GI:5305727
                                                                         2440 bp
activation-induced
 (house mouse)
                                                                            cytidine
                                                                                            mRNA
                                                                            deaminase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -----TGAGCTTGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ------GGAAAAGCATAT
                                                                                         linear
                                                                           (AID)
                                                                           05-AUG-1999
mRNA,
                                                                                                                                                                                                                                   1365
                                                                                                                                                                                                                                                              1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . 1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    662
                                                                                                                                                                                                                                                                                              1305
                                                                                                                                                                                                                                                                                                                           1381
                                                                                                                                                                                                                                                                                                                                                           1245
                                                                                                                                                                                                                                                                                                                                                                                        1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                     1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
TITLE
                뭆
                                        Ś
                                                                         멼
                                                                                              S
                                                                                                                                     맑
                                                                                                                                                                 Ś
                                                                                                                                                                                                   밁
                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                           뮍
                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                        皮
                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 1006;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sg
                436
                                                                           376
                                                                                                        363
                                                                                                                                      316
                                                                                                                                                                     303
                                                                                                                                                                                                                                                                196
                                           423
                                                                                                                                                                                                     256
                                                                                                                                                                                                                                243
                                                                                                                                                                                                                                                                                              183
                                                                                                                                                                                                                                                                                                                           136
                                                                                                                                                                                                                                                                                                                                                          123
                                                                                                                                                                                                                                                                                                                                                                                        76
                                                                                                                                                                                                                                                                                                                                                                                                                       63
                                                                                                                                                                                                                                                                                                                                                                                                                                                     16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 2440)

Muramatsu,M., Sankaranand,V.S., Anant,S., Sugai,M., Kinoshita,K., Davidson,N.O. and Honjo,T.

Specific expression of activation-induced cytidine deaminase (AID) a novel member of the RNA-editing deaminase family in germinal center B cells
U. Biol. Chem. 274 (26), 18470-18476 (1999)

99303612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (04-MAR-1999) Medical Chemistry,
Yoshida Sakyo-ku, Kyoto 606-8501, Japan
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 (bases 1 to 2440)
Muramatsu, M. and Hon
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10373455
                                                                                                                                                                                                                                                                                                                                                                                                          ACACTCTGGACACCACTATGGACAGCCTCTTGATGAACCGGAGGAGGTTTCTTTACCAAT
                                                                                                                                                        GCTACCGCGTCACCTGGTTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGTGG
                                                                                                                                                                                                                                                                                                                                              GAACCATCATTAATTGAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGGAGGCAAG-AAG
                                           cceacriticieceaeeeaaccccaaccicaeicieaeearciicaccecececciciaci
                                                                                                                                                                                                 GCCACGTGGAATTGTTGTTCCTACGCTACATCTCAGACTGGGACCTGGACCCGGGCCGGT
                                                                                                                                                                                                                                GGAGAGATAGTGCCACCTCCTGCTCACTGGACTTCGGCCACCTTCGCCAACAAGTCTGGCT
                                                                                                                                                                                                                                                                                     GGCGTGACAGTGCTACATCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGGCT
                                                                                                                                                                                                                                                                                                                                                                                        TCACGCTGGAGACCGATATGGACAGCCTTCTGATGAAGCAAAAGAAGTTTCTTTACCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAAGCAGCCTTGCTTGAAGCAAGCTTCCTTTGGCCTAAGACTTTGAGGGAGTCAAGAAAG
                                                                         GTTACCGCG:
                                                                                                                                                                                                                                                                                                                          21.4%;
milarity 69.4%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  93. .689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'gene="AID"
'note="APOBEC-1 homologue"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mol_type="mRNA"
db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gene="AID"
                                                                                                                                      CACCTGGTTCACCTCCTGGAGCCCGTGCTATGACTGTGCCCGGCACGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .2440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Honjo, T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 603.4; DB 10;
Pred. No. 6.4e-108;
0; Mismatches 351;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kyoto University,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                92;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (AID),
                                            482
                                                                                                                                                                                                                                                                                                                                                          182
```

뮍 S B δ 밁 Ś 밁 Ś 밁 Ś 밁 Ś 밁 S 밁 S 밁 Ś 뮍 Ś 밁 8 밁 S 뭐 8 밁 Ş 밁 Ś

495

435 422 375 362 315 302 255 242 195 135 122 75

10;

d non-B (2002)

cells

USA Of.

```
RESULT 11
AF529828
LOCUS
DEFINITION
                                                                                                                                                                   S
                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                               1192
                                                                                                                                      1366
                                                                                                                                                                           1442
                                                                                                                                                                                                                          1306
                                                                                                                                                                                                                                                                 1382
                                                                                                                                                                                                                                                                                                           1246
                                                                                                                                                                                                                                                                                                                                                   1322
                                                                                                                                                                                                                                                                                                                                                                                                                                         1262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               483
        Mus
                              AF529828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCCCAAACCATCTCTCCAAAGCATTAATATCCAATCATGCGCTGTATGTTTTAATCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AACTCTTCCATCAGGCCATGATCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTGGTGTTAGTGATAGATTTTTCCTATTCCTTTTCCCTTGACGTTTACTTTCAAGTAACACA 1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACAGTGGATAAAAACAGTCCTTCAAGTCTTCTCTGTTTTTTATTCTTCAACTCTCACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCTTCGGCGCATCCTTTTGCCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGAAAGAACTTTCAAAGCCTGGGAAGGGCTACATGAAAATTCTGTCCGGCTAACCAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAATAGCCATCATGACCTTCAAAGATTATTTTTACTGCTGGAATACTTTTTGTAGAAAACC
                                                                                                                                      GACTCTTTT
                                                                                                                                                                                                                        ACGAĀGAĀATCĀCTCTGĀĀĀĀTGĀGTTCĀCGCCTCĀĀGĀĀGCĀĀĀTCCCCTGGĀĀĀCĀCĀ
                                                                                                                                                                                                                                                             GTGAACAAGACACCCTAATAATGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAACGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGGGTATCAGTGACGGATTCTTCTATTCTTTCCCTCTAAGGCTCACTTTCAGG------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAGACGACCACAGTTTGTTACACCCCACCCTGTGTTCCTTGATTCATTTGAATTCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGAGAGGATCAAATGTTTTTATATCAACATCCTTTATTATTTGATTCATTTGAGTTAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTTTTTTCAACAGCAT --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AACATTGTCCCCTACT-GGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGGACCGCCAGAGCAATGATGTAAC--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGACTGGATAGAAAAACAACCCTTCA--ACTACATGTTTTTCTTCTTAAGTACTCACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGTTGGGATTTTGAAAGCAACCTCCTGGAATGTCACACGTGATGAAATTTCT---CTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AACTTCGGCGCATCCTTTTGCCCCTTGTACGAAGTCGATGACTTGCGAGATGCATTTCGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGAAAGAACTTTCAAAGCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTCTCCAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGATCGGGATCATGACCTTCAAAGACTATTTTTACTGCTGGAATACATTTGTAGAAAATC
                                                                                                                                                                           AACTCTTTT
                                                                                                                                                                                                                                                                                                       AGAATGCACGATCGCCTCTGGGTGATTTCAATAAAGGATCTTAAAATGCAGATGAGGACT
                                                                                                                                                                                                                                                                                                                                                 ACCATGCATGGTCACCTTCAAGCTACTTTAATAAAGGATCTTAAAATGGGCAGGAGGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                  AACGITTTTCTATGACTTTTAGGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AACATCGCCATCTACTGGGGAACAGCATAACTTCCAGACTTTGGGTCGTGAATGATGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AATAGAGAAGGAACACAGGTCTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTATAAGTGTAGGGGGAAA-----TTATATGACTTTTTAAAAAATACTTGAGCTGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCTTAGAGTTTACAGAAAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -CACAAGCCATTCTCTAAAAACATTAATACTCAGGCACATGCTGTATGTTTTCA-----
      musculus
                                                                                                                                                                                                                                                                                                                                                                                           -CTGTCCGTCGTGTTTTTCACATTTGTATGTGAAAGGGCTTGGGGTGGGATTTGA
                                                                                                                                                                           1450
      clone
      ---
597 bp
transgenic
      Homo
                            mRNA
      sapiens
      linear
ns AID (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ----GGAAAAGCATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 --TGAGCTTGCTGTGC
      C SYN 17-SEP-2002 (AID) mRNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1031
                                                                                                                                                                                                                                                               1441
                                                                                                                                                                                                                                                                                                                                                 1381
                                                                                                                                                                                                                                                                                                                                                                                           1245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             542
                                                                                                                                                                                                                                                                                                                                                                                                          뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
JOURNAL
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
KEYWORDS
                                                                  В
                                                                                                     Ş
                                                                                                                                                     밁
                                                                                                                                                                                         S
                                                                                                                                                                                                                                       맑
                                                                                                                                                                                                                                                                                                                         뮍
                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                맑
                        S
                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                          440
                                                                    301
                                                                                                            380
                                                                                                                                                     241
                                                                                                                                                                                               320
                                                                                                                                                                                                                                                                                   260
                                                                                                                                                                                                                                                                                                                                                                       200
                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                        140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    596;
                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 (bases 1 to 597)

Mattin, A. and Scharff, M.D.

Direct Submission

Submitted (17-JUL-2002) Cell Biology, Albert Einstein College Submitted (17-JUL-2002) Rark Ave. Chanin 404, Bronx, NY 10461, U Medicine, 1300 Morris Park Ave. Chanin 404, Bronx, NY 10461, U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              complete cds.
AF529828
AF529828.1 GI:22297243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Somatic hypermutation of the AID transgene in B and Proc. Natl. Acad. Sci. U.S.A. 99 (19), 12304-12308 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Martin, A. and Scharff, M.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
  GCTGAGCCCGAGGGGCTGCGGCGGCCGGGGGTGCAAATAGCCATCATGACC
                                                                                            AACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCTCTACTTCTGTGAGGACCGCAAG
                                                                                                                                                                                TTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGTGGCCGACTTTTCTGCGAGGG
                                                                                                                                                                                                                                                                                                                                                       TCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGGCTGCCACGTGGAATTGCTC
                                                                                                                                                                                                                                                                                                                                                                                                              GCTAAGGGTCGGCGTGAGACCTACCTGTGCTACGTAGTGAAGAGGCGTGACAGTGCTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCTAAGGGTCGGCGTGAGACCTACCTGTGCTACGTAGTGAAGAGGCGTGACAGTGCTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAATTCAAAAATGTCCGCTGG
                                                                    AACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCTCTACTTCTGTGAGGACCGCAAG
                                                                                                                                                     TTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGTGGCCGACTTTCTGCGAGGG
                                                                                                                                                                                                                                         TTCCTCCGCTACATCTCGGACTGGGACCTAGACCCTGGCCGCTGCTACCGCGTCACCTGG
                                                                                                                                                                                                                                                                      TTCCTCCGCTACATCTCGGGACTGGGACCTAGACCCTGGCCGCTCACCTGG
                                                                                                                                                                                                                                                                                                                             TCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGACTGCCACGTGGAATTGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAATTCAAAAATGTCCGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases 1 to 597)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21.1%; ilarity 99.8%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /codon_start=1
/product="ALD"
/protein_id="AAM95415.1"
/protein_id="AAM95415.1"
/protein_id="AAM95415.1"
/db_xref="[d1:27297244"
/db_xref="MD51LMANRKFLYQFKNVRWAKGRRETYLCYVVKRRDSATSFSL/translation="MD51LMANRKFLYQFKNVRWAKGRRETYLCYVVKRRDSATSFSL/translation="MD51LMANRKFLYQFKNVRWAKGRRETYLCYVVKRRDSATSFSL/translation="MD51LRANRKFLYQFKNVRWAKGRRETFK"
/translation="MD51LRANRKFLYQFKNVRWAKGRRETFK"
/translation="MD51LRANRKFLYQFKNVRWAKGRRETFK"
/translation="MD51LRANRKFLYQFKNVRWAKGRRETFK"
/translation="MD51LRANRKFLYQFKNVRWAKGRRETFK"
/translation="MD51LRANRKFLYQFKNVRWAKGRRETFK"
/translation="MD51LRANRKFLYQFKNVRWAKGRRETFK"
/translation="MD51LRANRKFLYQFKNVRWAKGRRETFK"
/translation="MD51LRANRKFLYQFKNVRWAKGRRETFX"
/translation="MD51LMANRKFLYQFKNVRWAKGRRETYLCYVVKRRDSATSFSL
/translation="MD51LMANRKFLYQFKNVRWAKGRRETYLCYVVKRRDSATSFSL
/translation="MD51LMANRKFLYQFKNVRWAKGRRETYLCYVVKRRDSATSFSL
/translation="MD51LMANRKFLYQFKNVRWAKGRRETYLCYVVKRRDSATSFSL
/translation="MD51LMANRKFLYQFKNVRWAKGRRETYLCYVVKRRDSATSFSL
/translation="MD51LRANRKFLYQFKNVRWAKGRRETYLCYVVKRRDSATSFSL
/translation="MD51LRANRKFLYQFKNVRWAKGRRETYLCYVVKRRDSATSFSL
/translation="MD51LRANRKFLYQFKNVRWAKGRRETYLCYVVKRRDSATSFSL
/translation="MD51LRANRKFLYQFKNVRWAKGRRETYLCYVVKRRDSATSFSL
/translation="MD51LRANRKFLYQFKNVRWAKGRRETYLCYVVKRRDSATSFSL
/translation="MD51LRANRKFLYQFKNVRWAKGRRETYLCYVVKRRDSATSFSL
/translation="MD51LRANRKFLY"
/translation="MD51LRANRKFL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         oryanism="Homo sapiens"
/mol_type≈"mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gene="AID"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'gene="AID"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mol_type="mRNA"
db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        transgenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (house
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              _type="hybridoma P1-5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 595.4; DB 12
Pred. No. 2.2e-106;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
```

597; <u>,</u>

Gaps

0

199

60 139

499 360 439 379

240 319 180 259 120

0

Gaps

0

```
JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 12
BT007402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ď,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                           CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                            Direct Submission

AL Submitted (13-MAY-2003) BD Biosciences Clontech, 1020 East Meadow Circle, Palo Alto, CA 94303, USA

This CDS clone is a part of a collection of human full length expression clones generated by BD Biosciences Clontech and the Harvard Institute of Proteomics. Each CDS has been cloned in two forms: with and without stop-codon (to allow fusion with C-terminal tag). The CDS has been directionally cloned using BD In-Fusion(TM) cloning system between the SalI and HindIII sites of the pDNR-DUAL vector. Additional sequences in the clone: 'ACC' after SalI site and before 'ATG' to provide Kozak consensus sequence; 'GG' after last codon and before HindIII site to maintain reading frame. Clone distribution: http://bioinfo.clontech.com/orfclones.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 (bases 1 to 597)
Kalnine, N., Chen, X., Rolfs, A., Halleck, A., Hines, L., Eisenstein, S., Koundinya, M., Raphael, J., Moreira, D., Kelley, T., LaBaer, J., Lin, Y., Phelan, M. and Farmer, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 (bases 1 to 597)

Kalnine, N., Chen, X., Rolfs, A., Halleck
Koundinya, M., Raphael, J., Moreira, D.,
Phelan, M. and Farmer, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cloning of human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BT007402.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTGCCCCTGTATGACGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTGA 676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTCTCCAGACAGCTTCGGCGCATCCTT 619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCAAAGATTATTTTACTGCTGGAATACTTTTGTAGAAAACCATGAAAGAACTTTCAAA 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TIGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTGA 597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTCAAAGATTATTTTTACTGCTGGAATACTTTTGTAGAAAACCATGAAAGAACTTTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCTGAGCCCGAGGGGCTGCGGCGGCTGCACCGCGCGGGGTGCAAATAGCCATCATGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sapiens activation-induced
                                                                DFGYLRNKNGCHVELLFLRYISDWDLDÞGRCYRVTWFTSWSPCYDCARHVADFLRGNP
NLSLRIFTARLYFCEDRKAEÞEGLRRLHRAGVQIAIMTFKDYFYCWNTFVENHERTFK
AWEGLHENSVRLSRQLRRILLFLYEVDDLRDAFRTLGL"
                                                                                                                                            /codon_start=1
/product="activation-induced cytidine
/protein_id="AAP36066.l"
/db_xref="GI:30583643"
                                                                                                                                                                                                                                                                                                      collection"
                                                                                                                                                                                                                                                                                                                                           /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="GH00009X1.0"
                                                                                                                                                                                                                                                                                                                                                                                                          organism="Homo sapiens"
                                                                                                                                                                                                                                                             note="Vector:
                                                                                                                             translation="MDSLLMNRRKFLYQFKNVRWAKGRRETYLCYVVKRRDSATSFSL
                                                                                                                                                                                                                                                           lab_host="DH5alpha T1 resistant"
note="Vector: pDNR-Dual"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GI:30583642
                                                                                                                                                                                                                                                                                                                                                                                    type="mRNA"
                                                                                                                                                                                                                                                                                                                     _lib="BD Creator(TM) CDS Library derived from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          full-length
          Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDSs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Halleck,A., Hines,L., Eisenstein, ira,D., Kelley,T., LaBaer,J., Lin,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cytidine deaminase mRNA,
        멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          in BD
      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Creator (TM) System Donor
    Length
                                                                                                                                                                                              deaminase'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRI 13-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                          REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 13
BT008226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity Matches 595; Conser
                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                    BT008226
Synthetic construct Homo deaminase mRNA, partial c BT008226
BT008226.1 GI:30585290
FLI_CDNA.
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   80
Submitted (13-MAY-2003) BD Biosciences Clontech, 1020 East Meadow Circle, Palo Alto, CA 94303, USA
This CDS clone is a part of a collection of human full length expression clones generated by BD Biosciences Clontech and the Harvard Institute of Proteomics. Each CDS has been cloned in two forms: with and without stop-codon (to allow fusion with C-terminal
                                                                                                                           2 (bases 1 to 597)
Kalnine,N., Chen,X., Rolfs,A., Halleck,A.,
Koundinya,M., Raphael,J., Moreira,D., Kell
Phelan,M. and Farmer,A.
Direct Submission
                                                                                                                                                                                                                                                                        artificial sequences.

1 (Dases 1 to 597)

Kalnine,N., Chen,X., Rolfs,A., Halleck,A.,
Koundinya,M., Raphael,J., Moreira,D., Kelle
Phelan,M. and Farmer,A.
Cloning of human full-length CDSs in BD Cre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Н
                                                                                                                                                                                                                              Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                       synthetic construct
                                                                                                                                                                                                                                                           vector
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TIGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCCTGGGAAGGGCTGCATGAAATTCAGTTCGTCTCTCCAGACAGCTTCGGCGCATCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTCAAAGATTATTTTTACTGCTGGAATACTTTTGTAGAAAACCATGAAAGAACTTTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCTAAGGGTCGGCGTGAGACCTACCTGTGCTACGTAGTGAAGAGGCGTGACAGTGCTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCTAAGGGTCGGCGTGAGACCTACCTGTGCTACGTAGTGAAGAGGCGTGACAGTGCTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAAATTCAAAAATGTCCGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTCTCCAGACAGCTTCGGCGCATCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTCAAAGATTATTTTACTGCTGGAATACTTTTGTAGAAAACCATGAAAGAACTTTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCTGAGCCCGAGGGGCTGCGGCGGCTGCACCGCGCGCGGGGTGCAAATAGCCATCATGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTGAGCCCGAGGGGCTGCGGCGGCTGCACCGCGCGGGGTGCAAATAGCCATCATGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCTCTACTTCTGTGAGGACCGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCTCTACTTCTGTGAGGACCGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGTGGCCGACTTTCTGCGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGTGGCCGACTTTCTGCGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTCCTCCGCTACATCTCGGACTGGGACCTAGACCCTGGCCGCCTGCTACCGCGTCACCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGGCTGCCACGTGGAATTGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGGCTGCCACGTGGAATTGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAAATTCAAAAATGTCCGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         construct Homo mRNA, partial c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. 2.0
; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           597 bp
lo sapiens
cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        . 2.6e-106;
thes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mRNA linear activation-induced
                                                                                                                                                                                                                                                                            BD Creator (TM)
                                                                                                                                                                k,A., Hines,L.,
Kelley,T., LaBa
                                                                                                                                                                                                                                                                                                                 k,A., Hines,L., Eisenst
Kelley,T., LaBaer,J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
```

LaBaer,J.,

Eisenstein,S.,
aer,J., Lin,Y.,

Eisenstein,

S

Lin,Y.,

SYN 13-MA cytidine

13-MAY-2003

595 674

```
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                               481
                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                              380
                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
       541
                                          620
                                                                                                                  560
                                                                                                                                                                                            500
                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                    440
                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                        320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  595;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tag). The CDS has been directionally cloned using BD In-Fusion(TM) cloning system between the Sall and HindIII sites of the pDNR-DUAL vector. Additional sequences in the clone: 'ACC' after Sall site and before 'ATG' to provide Kozak consensus sequence; 'GG' after last codon and before HindIII site to maintain reading frame. Clone distribution: http://bioinfo.clontech.com/orfclones.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                           TTGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTT
                                                                                                          GCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTCTCCAGACAGCTTCGGCGCATCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCTTTTCACTGGACTTTGGGTTATCTTCGCAATAAGAACGGCTGCCACGTGGAATTGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTAAGGGTCGGCGTGAGACCTACCTGTGCTACGTAGTGAAGAGGCGTGACAGTGCTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAATTCAAAAATGTCCGCTGG
                                                                             GCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTCTCCAGACAGCTTCGGCGCATCCTT
                                                                                                                                                       TTCAAAGATTATTTTTACTGCTGGAATACTTTTGTAGAAAACCATGAAAGAACTTTCAAA
                                                                                                                                                                                                                               GCTGAGCCCGAGGGGCTGCGGCGGCGCGCGCGGGGGTGCAAATAGCCCATCATGACC
                                                                                                                                                                                                                                                                                                                                              AACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCTCTACTTCTGTGAGGACCGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                        TTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGTGGCCGACTTTCTGCGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTAAGGGTCGGCGTGAGACCTACCTGTGCTACGTAGTGAAGAGGCGTGACAGTGCTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAAATTCAAAAATGTCCGCTGG
                                                                                                                                                                                  TTCAAAGATTATTTTTACTGCTGGAATACTTTTGTAGAAAACCATGAAAGAACTTTCAAA
                                                                                                                                                                                                                                                                    GCTGAGCCCGAGGGGCTGCGGCGGCTGCACCGCGCGGGGTGCAAATAGCCATCATGACC
                                                                                                                                                                                                                                                                                                                                                                                 TTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGTGGCCGACTTTCTGCGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTCCTCCGCTACATCTCGGACTGGGACCTAGACCCTGGCCGCTGCTACCGCGTCACCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGGCTGCCACGTGGAATTGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /protein_id="AAP36918.1"
/db_xref="G1:30585291"
/db_xref="G1:30585291"
/translation="MDSLLMNRRKFLYQFKNVRWAKGRRETYLCYVVKRRDSATSFSL
pfgylenkingggvellfilfiyisdwdldpggcyrvtwffswspcydcarhvadflrgnp
NLSLRIFTARLYFCEDRKAEPEGLRLHRAGVQIAIMTFKDYFYCWNTFVENHERTFK
AWEGLHENSVRLSRQLRRILLFLYEVDDLRDAFRTLGLL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  collection"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="synthetic construct"
/mol_type="mRNA"
/db_xref="taxon:32630"
/clone="GH00009L1.0"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    note="Mutations:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            product="Homo sapiens activation-induced cytidine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   transl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           note="Vector:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  clone_lib="BD Creator(TM)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . >597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       host="DH5alpha Tl resistant"
=="Vector: pDNR-Dual"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   _start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 595; DB 12
Pred. No. 2.6e-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    596:Stop->Leu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CDS Library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
   595
                                        674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MGC
                                                                                                                                                       480
                                                                                                                                                                                                                                                                                                                                              439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   199
                                                                               540
                                                                                                                  619
                                                                                                                                                                                            559
                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                    499
                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                      379
                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 14
AF529815
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                     Ş
                                                          밁
                                                                                           Ş
                                                                                                                                    밁
                                                                                                                                                                     Ś
                                                                                                                                                                                                            문
                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Sim
Matches 595;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                       440
                                                            301
                                                                                               380
                                                                                                                                      241
                                                                                                                                                                         320
                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                 260
                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                          200
                                                                                                                                                                                                                                                                                                                                                                                                    140
                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 (bases 1 to 596)

Martin, A. and Scharff, M.D.

Somatic hypermutation of the AID transgene in B and non-B Proc. Natl. Acad. Sci. U.S.A. 99 (19), 12304-12308 (2002)

2 (bases 1 to 596)

Martin, A. and Scharff, M.D.

Direct Submission

Submitted (17-JUL-2002) Cell Biology, Albert Einstein Coll Submitted, 1300 Morris Park Ave. Chanin 404, Bronx, NY 1046
                                                                                                                                                                                                                                                                                                                                                                                                                                         ы
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens clone Ramos
AF529815
AF529815.1 GI:22297217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AF529815
GCTGAGCCCGAGGGGCTGCGGCGGCTGCACCGCGCCGGGGTGCAAATAGCCATCATGACC
                                                                                                                                                             TTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGTGGCCGACTTTCTGCGAGGG
                                                            AACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCTCTACTTCTGTGAGGACCGCAAG
                                                                                   AACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCTCTACTTCTGTGAGGACCGCAAG
                                                                                                                                      TTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGTGGCCGACTTTCTGCGAGGG
                                                                                                                                                                                                              TTCCTCCGCTACATCTCGGACTGGGACCTAGACCCTGGCCGCTGCTACCGCGTCACCTGG
                                                                                                                                                                                                                                       TICCTCCGCTACATCTCGGACTGGGACCCTAGACCCTGGCCGCCTGCTACCGCGTCACCTGG
                                                                                                                                                                                                                                                                                      TCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGGCTGCCACGTGGAATTGCTC
                                                                                                                                                                                                                                                                                                                                                               GCTAAGGGTCGGCGTGAGACCTACCTGTGCTACGTAGTGAAGAGGCGTGACAGTGCTACA
                                                                                                                                                                                                                                                                                                                                                                                                GCTAAGGGTCGGCGTGAGACCTACCTGTGCTACGTAGTGAAGAGGCGTGACAGTGCTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAATTCAAAAATGTCCGCTGG
                                                                                                                                                                                                                                                                                                                         TCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGGCTGCCACGTGGAATTGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAATTCAAAAATGTCCGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /translation="MDSLLMNRRKFLYQFKNVRWAKGRRETYLCYVVKRRDSATSFSL
DFGYLRKNGCHVELLFLRYISDWDLDPGRCYRVTWFTSWSFCYDCALHVADFLRGNP
NLSLRIFTARLYFCEDRKABPEGLRELHRAGVQIAIMTFKDYFYCWNTFVENHERTFK
AWEGLHENSVRLSRQIRRILLPLYEVDDLRDAFRTLGL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /product="AID"
/protein_id="AAM95402.1"
/db_xref="GI:22297218"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'gene="AID"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               organism="Homo sapiens"

mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gene="AID"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               codon start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            note="integrated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            clone="Ramos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 594.4; DB 9;
Pred. No. 3.4e-106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              96 bp
AID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                into
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mRNA
(AID) mT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Burkitt's lymphoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mRNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
partial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRI 17-SEP-2002 cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cell line Ramos"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           College of
10461, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
```

밁 8 맑 Š B Ś 멍 δ 밁 Ş 뭐 Ş 밁 á 밁 Ś 밁 Š 片 Š

499 360 439 300 379 240

Ş	9	8	מם	γŞ	αd	Qγ	Query Mat Best Loca Matches	ORIGIN	CDS	gene		FEATURES sourc	JOURNAL		TITLE JOURNAL REFERENCE	REFERENCE	SOURCE ORGANISM	ACCESSION VERSION KEYWORDS	RESULT 15 AF529816 LOCUS DEFINITION	D CY	Db	\$	Db	Ş	Db
260 TTCCTCCGCTACATCTCGGACTGGGACCTAGACCCTGGCCGCTGCTACCGCGTCACCTGG 319	121 TCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGGCTGCCACGTGGAATTGCTC 180	200 TCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGGCTGCCACGTGGAATTGCTC 259	61 GCTAAGGGTCGGCGTGAGACCTACCTGTGCTAGCGTAGAGAGGCGTGACAGTGCTACA 120	140 GCTAAGGGTCGGCGTGAGACCTACCTGTGCTACGTAGTGAAGAGGCGTGACAGTGCTACA 199	1 ATGGACAGCCTCTTGATGAACCGGAAGTTTCTTTACCAATTCAAAAATGTCCGCTGG 60	80 ATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAATTCAAAAATGTCCGCTGG 139	tch 21.1%; Score 594.4; DB 9; Length 596; al Similarity 99.8%; Pred. No. 3.4e-106; 595; Conservative 0; Mismatches 1; Indels 0; Gaps 0;	/gene="AID" /note="integrated into Burkitt's lymphoma cell line Ramos" /codon_start=1 /codon_start=1 /producte="AID" /producte="AID" /protein_id="AAM95403.1" /db_xref="GI:22297220" /db_xref="GI:22297220" /translation="MDSLLMNRRKFLYQFKNVRWAKGRRETYLCYVVKRRDSATSFSL DFGYLRNKNGCHVELLFLRYLSDWDLDPGRCZRYLWFTSRSFCYDCARHYADFLRGNP NLSRAIFTJARLYFCEDRKAAPSGLARLHRAGVQIAIMTFKDFFYCWNTFVENHERTFK AWEGLHENSVRLSRQLRRILLPLYEVDDLRDAFRTLGL"	1. >596	1>596 /gene="AlD"	/organism="Homo sapiens" /mol type="mRNA" /db_xref="taxon:9606" /clone="Ramos 2"	e 1. 596	ll Biology, Albert Einstein College	Martin, A. and Scharff, M.D.	Somatic Appermutation of the AID transgene in B and non-B cells Proc. Natl. Acad. Sci. U.S.A. 99 (19), 12304-12308 (2002)	es; Catarrhini; Hominidae;	Homo sapiens (human) Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;	AF529816 AF529816.1 GI:22297219	AF529816 596 bp mRNA linear PRI 17-SEP-2002 Homo sapiens clone Ramos 2 AID (AID) mRNA, partial cds.	620 TIGCCCCTGTATGAGGTTGATGACTTACGAGAGGCATTTCGTACTTTGGGACTTTG 675 541 TTGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTG 596	81	560 GCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTCTCCAGACAGCTTCGGCGCGCATCCTT 619	œ	ហ	361 GCTGAGCCCGAGGGGCTGCGGCGGCTGCACCGCGCGGGGGTGCAAATAGCCATCATGACC 420

Search completed: March 7, 2004, 09:57:47 Job time: 10908 secs

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OM nucleic
                                                                   ი
                                                                                                                                 G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          score greater than or equal to the score of the result bein and is derived by analysis of the total score distribution.
                                                               21774.6
21774.6
21774.6
21774.6
603.217.2
2095.2
2095.2
2095.2
2093.8
2093.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score
                                                                                                                                                                                                                                                                                                                                                                                                                                           2791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IDENTITY NUC
Gapop 10.0 , Gapext 1.0
  1990.0
990.0
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
777.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              March 7, 2004, 05:26:21; Search time 1058 Seconds (without alignments) 11315.144 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N_Geneseq_29Jan04:*
1: geneseqn1980s:*
2: geneseqn1990s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3373863 seqs, 2124099041 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-966-880A-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      geneseqn2003bs:*
geneseqn2003cs:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      geneseqn2002s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            geneseqn2001bs:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 geneseqn2003as:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   geneseqn2001as:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       geneseqn2000s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             geneseqn2004s:*
13862
13862
13862
110000
7809
7809
30393
25012
25012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                     6564
11204
11204
11204
2172
                                                                                                                                                                                                                         1543
1665
2440
597
574
                                                                                                                                                                                                                                                                                                                                                                                                                                           2818
2791
2791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                               AAL02789
AAAL07516
ABA07516
ABA0745
ACF42745
AAL03406
ABA15724
AAK67239
                                                                                                                                                                                                                                                             ABS73286
AAC55319
ABX05468
AAK81088
AAC55307
ADB88952
                                                                                                                                                                                                                                                                                                                                                                                                                     AAC55312
ABS73287
ABS73288
AAC55314
                                                                                                                                                                                                                    AAK81089
AAK61819
                        ABA15431
ABZ73798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6747726
                                                                                                                                 JX05468 Human imm
Aac55307 Mouse act
Adb88952 AID gene
Aak81089 Human imm
Aak61819 Human imm
Aak61819 Human rev
Aal02789 Human rev
Aal02789 Human o
                                                                                                                                                                                                                                                                                                                            Aac55339 Human act
Ab873286 DNA encod
Aac55319 Human act
Abx05468 Human nov
                                                                                                                              Aba08208
Acf42745
                                                                                                                                                                                                                                                                                                                                                                                                                   Abs73288 DNA encod
Aac55314 Human act
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Aac55312 Human act
Abs73287 DNA encod
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Description
                                        Aba15431
                                                               Human
Human
Human
                                                                                                                            Human
                                        Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA encod
                                                                                                                              imm
imm
rep
rep
ova
```

	o o	n	വ വ	n	ი იიი
444	4 4 4 4 2 1 0 4 2 1 0	387	ա 4 Մ Թ	33200	2 2 2 2 2 2 4 10 10 17 18
281.4 281.4 281.4	282.4 282.4	283.2	283.2 283.2	284. 284. 284. 283. 4	22 82 83 83 83 83 83 83 83 83 83 83 83 83 83
	100.0	10.0	10.0	10.2 10.1 10.1	10.2 10.2 10.2
65608 23452	13919 13919 21404	22428	22428 22428 22428 22428	172570 32249 32249 129722 129722	96596 96596 96596 110000
0004	თთთσ	0 7	4 7 7	04400	® v v v 4
ABL64414 ABL67668 AAS42122	ABK86221 ABK86220 ABK86229 ABL62910	ADA98730 ABK86218	AAS41759 ABZ67767 ABZ74201	ABQ88207 AAL04676 ABL9583 ABQ88117 ABA96614	ADA02864 ADB72602 ADCB5343 ADE11169 AAK71358
Ab164414 Ab167668 Ab842122	Abk86221 Abk86220 Abk86229	Ada98730 Abk86218	Aas41759 Abz67767 Abz74201	Abq88207 Aa104676 Ab197583 Abq88117 Aba96614	Ada02864 Adb72602 Adc85343 Ade11169 Aak71358
Stomach c Oesophagu Genomic s	AIP-1/FLA AIP-1/FLA AIP-1/FLA	Human sec	Genomic s Human sec Secreted	Human Human Human Human Human	Human ITP Human ITP Mouse Itp Human tra Human imm

ALIGNMENTS

AAC55312 standard; cDNA; 2818 BP.

ARCSSILT 1
ARCSSILS II
ARCSILS II
AR 29-MAR-1999; 24-JUN-1999; 27-DEC-1999; Activation-induced cytidine deaminase; AID; cytidine deaminase; immune related disease; allergy; allergic disease; antiallergic; antiallergic; antianaemic; antiasthmatic; ophthalmological; anti-HIV; dermatological; gene therapy; B cell associated immune system disorder; food allergy; immunodeficiency disease; immunoglobulin A deficiency disease; asthma; IgA nephritis; gamma-globulinaemia; aropic dermatitis; allergic colitis; drug allergy; allergic rhinitis; Rosen disease; Diffeorge disease; AIDS; ataxia telangiectasia; common variable immunodeficiency disorder; major histocompatibility class II deficiency disease; asthma; auto immunodeficiency syndrome; IgG subclass selection disorder; ss. WPI; 2000-611715/58. P-PSDB; AAB24198. 05-OCT-2000. (NISB) 28-MAR-2000; 2000WO-JP001918 WC200058480-A1. Homo sapiens. Human activation-induced cytidine deaminase encoding cDNA SEQ 05-FEB-2001 AAC55312; Ţ, JAPAN TOBACCO INC. HONJO T. Muramatsu (first entry) 99JP-00087192. 99JP-00178999. 99JP-00371382. /*tag= a
/product= "activation-induced Location/Qualifiers cytidine deaminase" Ħ NO:7.

The present sequence encodes human activation-induced cytidine deaminase (C (AID). AID structurally relates to an RNA editing enzyme APOBEC-1 and has cytidine activity similar to APOBEC-1. AID has antiallergic, antianaemic, antiasthmatic, ophthalmological, anti-HIV and dermatological activities, and can be used in gene therapy. AID polynucleotides are useful in methods for identifying drugs for the treatment of B cell associated immune system disorders, immunodeficiency diseases and allergies, such as immunoglobulin A (IgA) deficiency disease, IgA nephritis, gamma-c globulinaemia, atopic dermatitis, allergic colitis, asthma, food allergy, allergic rhinitis, Rosen disease, DiGeorge disease, ataxia telangiectasia, common variable immunodeficiency disorder, MHC (major histocompatibility class) class II deficiency disease, AIDS (auto c immunodeficiency syndrome), elevated IgE disorder, and IgG subclass selection disorder. The DNA sequences encoding AID may be used for gene c therapy and the antibodies to the AID protein may be used for diagnosis of the autopath of these disorders. Query Match Best Local Matches 2818; Nucleic acid encoding target for drug develoallergies. Sequence Claim 3; Page 135-139; 174pp; Japanese Local Similarity 301 241 241 181 181 601 541 541 481 481 421 301 121 121 109 421 361 361 5 5 AGAGAACCATCATTAATTGAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGGAGGCAAGA 2818 BP; 868 A; 548 CTGCCACGTGGAATTGCTCCTCCCCCCTACATCTCGGACTGGGACCTAGACCCTGGCCG AGACACTCTGGACACCACTATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCA ACAGCTTCGGCGCATCCTTTTGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCG CCATGAAAGAACTTTCAAAGCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTCTCCAG GCAAATAGCCATCATGACCTTCAAAGATTATTTTTACTGCTGGAATACTTTTGTAGAAAA GCAAATAGCCATCATGACCTTCAAAGATTATTTTTACTGCTGGAATACTTTTTGTAGAAAA GGCCGACTTTCTGCGAGGGAACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCTCTA GGCCGACTTTCTGCGAGGGAACCCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCCTCTA GAGGCGTGACAGTGCTACATCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGG GAGGCGTGACAGTGCTACATCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGG AGACACTCTGGACACCACTATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCA ACAGCTTCGGCGCATCCTTTTGCCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCG CCATGAAAGAACTTTCAAAGCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTCCAG CTTCTGTGAGGACCGCAAGGCTGAGCCCGAGGGGCTGCGGCGGCTGCACCGCGCGGGGT CTGCTACCGCGTCACCTGGTTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGT CTGCTACCGCGTCACCTGGTTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCCGACATGT AGAGAACCATCATTAATTGAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGGAGGCAAGA CTTCTGTGAGGACCGCAAGGCTGAGCCCGAGGGGCTGCGGCGCACCGCGCGGGGT Conservative coding activation induced cytidine deaminase, useful development for immune-related diseases including 100.0%; 0 C; 626 G; 776 Score Pred. Mismatches 2818; No. 0; DВ T; 0 U; 0 Other; 0; ω •• Indels Length <u>.</u> Gaps 36 540 540 480 480 420 180 120 60 600 600 420 360 360 300 240 180 120 60 660 660 240 0 Ś Ş 문 Ş 밁 δ 문 Ś 문 문 S 문 Ś 밁 Ś 片 Ś 밁 8 В Ś 片 8 片 S 밁 8 밁 S 밁 S 맑 Ś 밁 Š 밁 Ś 1681 1681 1621 1621 1561 1501 1501 1441 1441 1381 1381 1321 1321 1141 1141 1081 1021 1561 1261 1261 1201 1201 1081 1021 961 901 841 199 961 901 841 781 781 721 721 TACTTTGGGACTTTGATAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTG GCAAACAATTGGAAGGAAGTTGCTTGAATGTTGGGGAAGAGGAAAATCTATTGGCTCTCGT AAACTCTTTTAAGGAAGTCCCTAATTTAGAAACACCCACAAACTTCACATATCATAATTA GACCATGCATGGTCACCTTCAAGCTACTTTAATAAAGGATCTTAAAAATGGGCAGGAGGAC GACCCCAAACCATCTCTCCAAAGCATTAATATCCCAATCATGCGCTGTATGTTTTAATCAG AAACTCTTCCATCAGGCCATGATCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGT TGGCTTGAACACAGGTGTTCAAGGCCAGCCTGGGCAACATAACAAGATCCTGTCTCTCAA GATGCTTCTCCCAAAGGTATATTAACTATATAAGAGAGTTGTGACAAAACAGAATGATAA GATGCTTCTCCCAAAGGTATATTAACTATATAAGAGAGTTGTGACAAAACAGAATGATAA GGGTCTCTTCATCTCAGAAATGCCAATCAGGTCAAGGTTTGCTACATTTTGTATGTGTGT GCAAACAATTGGAAGGAAGTTGCTTGAATGTTGGGGAAGAGGAAAATCTATTGGCTCTCGT GACCATGCATGGTCACCTTCAAGCTACTTTAATAAAGGATCTTAAAAATGGGCAGGAGGAC GACCCCAAACCATCTCTCCAAAGCATTAATATCCAATCATGCGCTGTATGTTTTAATCAG AAACTCTTCCATCAGGCCATGATCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGT AGTGGTGTTAGTGATAGATTTTTCTATTCTTTTCCCTTGACGTTTACTTTCAAGTAACAC AGTGGTGTTAGTGATAGATTTTTCTATTCTTTTCCCTTGACGTTTACTTTCAAGTAACAC GTGAGAGGATCAAATGTTTTTATATCAACATCCTTTATTATTTGATTCATTTGAGTTAAC GTGAGAGGATCAAATGTTTTATATCAACATCCTTTATTATTTGATTCATTTGAGTTAAC CAACGITITICTATGACITITAGGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCATG GCAACATTGT GCAACATTGTCCCCTACTGGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGT AAAATAGAGAAGGAACACAGGTCTGGCCAGGGACGTGCCTGCAATTGGTGCAGTTTTGAAT AAAATAGAGAAGGAACACAGGTCTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAAT TTTCTTAGAGTTTACAGAAAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTTG AAGACAGTGGATAAAAAACAGTCCTTCAAGTCTTCTCTGTTTTTATTCTTCAACTCTCAC AAACTCT TGTGAACAAGACACCCTAATAATGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAACGC TGTGAACAAGACACCCTAATAATGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAACGC AAGACAGTGGATAAAAAACAGTCCTTCAAGTCTTCTCTGTTTTTATTCTTCAACTCTCAC CTATGACTTTTAGGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCATG ITTACAGAAAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTTG 1740 1740 1680 1680 1620 1620 1440 1380 1380 1320 1320 1260 1200 1140 1140 1080 1080 1020 1020 1560 1560 1500 1500 1440 960 960 900 900 840 840 780 780 720

맑 S

Ş

Ś

В S 뭐 Ş 밁 Ś 밁 Ś 밁 8 밁

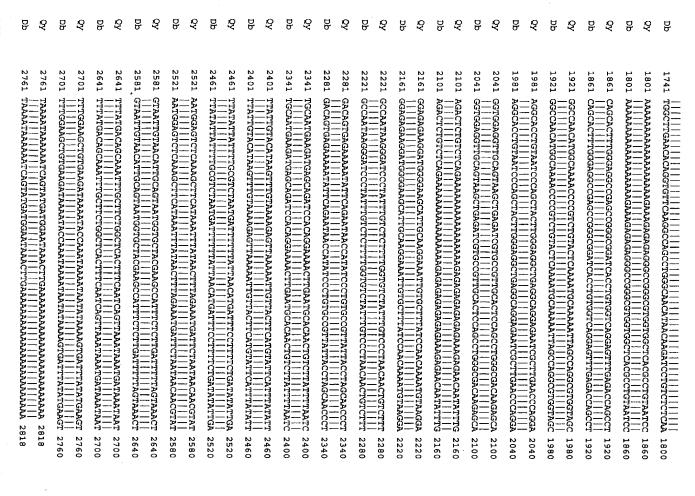
유

S

밁

Ś

Ś В



```
Chromosome aberration; oncogenic fusion protein; cancer; proliferative disease; cellular protein isoform; heat shock protein isoform; heat shock protein isoform; heat shock protein isoform; proliferative disease; cellular protein isoform; heat shock protein; HSP-90; rheumatoid arthritis; cancer; haematopoietic diseasemia; CML; cell lymphona; B cell lymphoma; chronic myeloid leukaemia; CMML acute myeloid leukaemia; AML; chronic myelomonocytic leukaemia; CMML acute lymphoblastic leukaemia; ALL; APL; NHL; solid tumour; papillary thyroid carcinoma; Ewing's sarcoma; melanoma; liposarcoma; papillary thyroid carcinoma; Ewing's sarcoma; melanoma; liposarcoma;
                                                                                                                                                                                                                                                                                                                                                          Fritz LC,
                                                                                                                                                                                                                                                                                                                                                                                                      01-MAR-2001; 2001US-0272751P.
                                                                                                                                                                                                                                                                                                                                                                                                                           01-MAR-2002; 2002WO-US006518
                                                                                                                                                                                                                                                                                                                           P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  12-SEP-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200269900-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA encoding human translocation del(12p)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           04-DEC-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ABS73287 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 rhabdomyosarcoma; synovial sarcoma; viral infection; gene;
                                                                                                                                                                                                                                                                                                                                                                                CONF-) CONFORMA THERAPEUTICS
                                                                                                                                                                                                                                                                                                                           2002-698710/75
DB; ABG95083.
                                                                                                                                                                                                                                                                                                                                                          Burrows
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2791
                                                                                                                                                                                                                                                                                                                                                                                CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CMML;
```

Disclosure; Page 246-247; 389pp; English. Treating genetically-defined disease associated with chromosomal aberrations yielding oncogenic fusion proteins, e.g. cell proliferative diseases, involves administering an inhibitor of heat shock protein 90. The invention describes a method of treating genetically-defined disease

CC associated with chromosomal aberrations yielding oncognic fusion.

CC proteins (I), treating cancerous cells containing (I) in a heterogeneous cell population, treating protein cells containing (I) in a heterogeneous cell population, treating protein diseases associated with mutant CC protein or cellular protein isoforms (II) dependent on heat shock protein (HSP)-90, or selectively treating cells expressing (II) involving CC administering HSP90-inhibitor. The method is useful for treating CC genetically-defined disease with chromosomal aberration yielding CC oncogenic fusion protein, treating cancerous cells containing fusion CC protein in heterogeneous cell population, treating proliferative disease CC (e.g. rheumatoid arthritis or cancer) associated with mutant protein or CC protein isoform dependent on heat shock protein (HSP)-90 (e.g. CC protein isoform in a patient heterozygous for (II). The method is useful CC protein isoform in a patient heterozygous for (II). The method is useful CC lymphoma, chronic myeloid leukaemia (CML), APL, ALL, AML, NHL and CMML, CC or a disease characterised by a solid tumour such as papillary thyroid Carcinoma, Emigy's sarcoma, melanoma, liposarcoma, rhabdomyosarcoma and CC synovial sarcoma. The method is also useful for treating viral confections. This represents the DNA sequence of a chromosome aberration is cell of the confections. This represents the DNA sequence of a chromosome aberration is cell of the confections.

Sequence 2791 BP; 842 A; 548 C; 625 G; 776 T; 0 U; 0 Other;

띪

٠. و

Length

2791;

Similarity

밁 S Query Match Best Local S Matches 2791 GAACCATCATTAATTGAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGGAGGCAAGAAGA Conservative 99.0%; 0 Score 2791; Pred. No. (Mismatches 0 , , Indels 0 Gaps 60 63

Ś

64

CACTCTGGACACCACTATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAATT

123

RESULT

5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	2
541 TGABAGAACTTTCAAAGCCTGGGAAGGCTGCATGAAATTCAGTTCAGTTCCAGACA 600 604 GCTTCGGCGCATCCTTTTGCCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTAC 660 604 GCTTCGGCGCATCCTTTTGCCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTAC 660 605 TTTGGGACTTTGATAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGTGATGAAG 601 GCTTCGGGCGATCTTGATAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAG 601 TTTGGGACTTTGATAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAG 601 TTTGGGACTAAAAAACACTCCTTCAAGGATTGCACACACA	CACTTTCTGGACCCTACATCCTCCTCCTACATCTCGGACCTGGACCTACCT
	·
8 6 8 6 8 6 8 6 8 6 8 6 8 6 8 6 8 6 8 6	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$
### TGGGAACCGTGGCACACGCTCATAGTTCTAGCTGTTGGGAGGTTGAGGAGGATGG 174 ####################################	1204 CCCGAAACCATCTCCCAAAACCATTAATATCCAATCATGAGGTGATCTGGGTGATTGTGAC 1200 1204 CCCAAACCATCTCCTCCCAAAACCATTAATATCCAATCATGAGCGCTGTATCTTTAATCAGCAG 1263 1201 CCCAAACCATCTCTCCCAAAACCATTAATATCCAGAATCATGCGCTGTATGTTTTAATCAGCAG 1260 1264 AAGCATGTTTTTATGTTTGTACAAAAAAAAATTGTTATGGGTGGG

```
ABSULT 3
ABST3288
ID 73288
ID 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ίδ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chromosome aberration; oncogenic fusion protein; cancer; proliferative disease; cellular protein isoform; heat shock protein HSP-90; rheumatoid arthritis; cancer; haematopoietic disorder; T cell lymphona; B cell lymphoma; chronic myeloid leukaemia; CML; acute myeloid leukaemia; AML; chronic myelomonocytic leukaemia; CMML acute lymphoblastic leukaemia; ALL; APL; NHL; solid tumour; papillary thyroid carcinoma; Ewing's sarcoma; melanoma; liposarcoma; papillary thyroid carcinoma; Ewing's sarcoma; melanoma; liposarcoma;
     WPI; 2002-698710/75.
P-PSDB; ABG95084.
                                                                                                                                                                                       01-MAR-2001; 2001US-0272751P
                                                                                                                                                                                                                                          01-MAR-2002; 2002WO-US006518
                                                                                                                                                                                                                                                                                                                                                      WO200269900-A2
                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  04-DEC-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABS73288
                                                                                                                                                                                                                                                                                                                                                                                                                                                              rhabdomyosarcoma; synovial sarcoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2284
                                                                                5
                                                                                                                                     CONFORMA THERAPEUTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AATAAAAATCAGTATGATGGAATAAACTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGAAGCTGTGAAGATAAAATACCAAATAAAATATAAAAGTGATTTATATGAAGTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTGTAACATTGCAGTAATGGTGCTACGAAGCCATTTCTCTTGATTTTTAGTAAACTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGAGTCTCAAAGCTTCATAAATTTATAACTTTAGAAATGATTCTAATAACAACGTATGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATTATTITIGCGTCTAATGATTTTTTTAACATGATTTCCTTTTTCTGATATATGAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AATGAAGATGAGCAGAGATCCACAGGAAAACTTGAATGCACAACTGTCTTATTTTAATCTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AATAAAAATCAGTATGATGGAATAAACTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTGTACATAAGTTTGTAAAAAGAGTTAAAAAATTGTTACTTCATGTATTCATTTATATTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGTGAGAAAATATTCAGAATAACCATATCCCTGTGCCGTTATTACCTAGCAACCCTTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGTGAGAAAAATATTCAGAATAACCATATCCCTGTGCCGTTATTACCTAGCAACCCTTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTGTAACATTGCAGTAATGGTGCTACGAAGCCATTTCTCTTGATTTTTAGTAAACTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGAGTCTCAAAGCTTCATAAATTTATAACTTTAGAAATGATTCTAATAACAACGTATGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TATTATTTTGCGTCTAATGATTTTTTATTAACATGATTTCCTTTTCTGATATATTGAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTGTACATAAGTTTGTAAAAGAGTTAAAAATTGTTACTTCATGTATTCATTTATATTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AATGAAGATGAGCAGATCCACAGGAAAACTTGAATGCACAACTGTCTTATTTTAATCTTA
                                                                                Burrows
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    I'GAAGATAAAATACCAAATAAAATAATATAAAAGTGATTTATATGAAGTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     translocation del(12p) protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                     CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                        viral infection; gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CMAE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2403
```

```
The invention describes a method of treating genetically-defined disease CC associated with chromosomal aberrations yielding oncogenic fusion CC proteins (I), treating cancerous cells containing (I) in a heterogeneous CC cell population, treating proliferative diseases associated with mutant protein or cellular protein isoforms (II) dependent on heat shock protein CC (HSP)-90, or selectively treating cells expressing (II) involving administering HSP90-inhibitor. The method is useful for treating conception or cellular protein, treating cancerous cells containing fusion conception fusion protein, treating cancerous cells containing fusion conception in heterogeneous cell population, treating proliferative disease (e.g. theumatoid arthritis or cancer) associated with mutant protein or cellular protein isoform dependent on heat shock protein (HSP)-90 (e.g. CD protein isoform in a patient heterozygous for (II). The method is useful cor treating a disease e.g. haematopoletic disorder such as T or B cell (Hymphoma, chronic myeloid leukaemia (CML), APL, ALL, AML, NHL and CMML, or a disease characterised passociated with mutant protein or conception or disease characterised passociated with as papillary thyroid carcinoma, Ewing's sarcoma, melanoma, liposarcoma, rhabdomyosarcoma and confident carcinoma. The method is also useful for treating viral carcinoma. This represents the DNA sequence of a chromosome aberration or conceptions. This represents the DNA sequence of a chromosome aberration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Treating genetically-defined disease associated with chromosomal aberrations yielding oncogenic fusion proteins, e.g. cell prolif diseases, involves administering an inhibitor of heat shock prot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Page 248-249; 389pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         e.g. cell proliferative f heat shock protein 90.
```

Sequence 2791 BP; 842 A; 548 C; 625 G; 776 T; 0 U; 0 Other; 99.0%; Score 2791; Pred. No. 0; DB ٠<u>.</u> Length

Similarity

S 밁 δ 밁 8 밁 8 밁 Ś 밁 ঠ 밁 Ś 밁 Ś 밁 Ś 웑 S Query Match Best Local Sim Matches 2791; 544 481 541 484 421 424 361 364 301 304 241 244 181 184 121 124 5 64 ш 4 GAACCATCATTAATTGAAGTGAGATTTTTCTGGCCTGAGACTTTGCAGGGAGGCAAGAAGA TGAAAGAACTTTCAAAAGCCTGGGAAAAGCGGCTGCATGAAAATTCAGTTCGTCTCTCCAGACA GCGTGACAGTGCTACATCCTTTTCACTGGACTTTGGGTATCTTCGCAATAAGAACGGCTG CACTCTGGACACCACTATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAATT AATAGCCATCATGACCTTCAAAGATTATTTTTACTGCTGGAATACTTTTGTAGAAAACCA AATAGCCATCATGACCTTCAAAGATTATTTTTACTGCTGGAATACTTTTGTAGAAAACCA CTACCGCGT CTACCGCGTCACCTGGTTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGTGGC GCGTGACAGTGCTACATCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGGCTG TGAAAGAACTTTCAAAGCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTCTCCAGACA CGACTTTCTGCGAGGGAACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCTCTACTT CGACTTTCTGCGAGGGAACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCTCTACTT CCACGTGGAATTGCTCCTCCCGCTACATCTCGGACTGGGACCTAGACCCTGGCCGCTG CCACGTGGAATTGCTCTTCCTCCGCTACATCTCGGACTGGGACCTAGACCCTGGCCGCTG CACTCTGGACACCACTATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAATT GAACCATCATTAATTGAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGGAGGCAAGAAGA Conservative o .. Mismatches 0; Indels 0 Gaps 603 540 543 480 483 420 423 360 363 300 303 240 243 180 183 120 123 60 63 0

2764 AATAAAAAATCAGTATGATGGAATAAACTTG 2794		1521 GCTTCTCCCAAAGGTATTAACTATAAGAGAGTTGTGACAAAACAGAATGATAAAGC 1680	5
2704 GGARGCIOIGARGHTARAIN CHARIANAN LARINIANAGIGAITTAINIGHAGITA 	B &	GCTTCTCCCAAAGGTATATTAACTATATAAGAGAGTTGTGACAAAACAGAATGATAAAAGC	\$ 8
	2 D 4	1564 TCTCTTCATCTCAGAAATGCCAATCAGGTCAAGGTTTGCTACATTTTGTATGTGTGTG	B 8
250* ALIGIANCHILOCAGIANICOGIC INCOMMOCCATILICICI INTILIZADA PARA CITTE 2581 ATTGTAACATTGCAGTAATGGTGCTACGAGCCATTTCCTCTGATTTTTAGTAAACTTTTT 2581 ATTGTAACATTGCAGTAATGGTGACTACGAGCCATTTCCTCTTGATTTTAGTAAAATGATTTTTTTT	S B &	1504 AACAATTGGAAGGTAGGTTGAATGTTGGGGAAGAGAAAATCTATTGGCTCTCGTGGG 1563 	8 8
	}	1444 CTCTTTTAAGGAAGTCCCTAATTTAGAAACACCCACAACTTCACATATCATAATTAGCA 1503 	윰 성
) B &	1384 GAACAAGACACCCTAATAATGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAACGCAAA 1443 	용 성
404	? B &	1324 CATGCATGGTCACCTTCAAGCTACTTTAATAAAGGATCTTTAAAATGGGCAGGAGGACTGT 1383 	용 성
344	B &	1264 AAGCATGTTTTTATGTTTGTACAAAAGAAGATTGTTATGGGTGGG	8 8
) B &	1204 CCCAAACCATCTCTCCAAAGCATTAATATCCAATCATGCGCTGTATGTTTTAATCAGCAG 1263 	g 8
	. p &	1144 CTCTTCCATCAGGCCATGATCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTGAC 1203	8
161	S & &	1084 GGTGTTAGTGATAGATTTTTCTATTCTTTTCCCTTGACGTTTACTTTCAAGTAACACAAA 1143	용 정
) p &	1024 AGAGGATCAAATGTTTTTATATCAACATCCTTTATTATTTAT	8 8
	2 dg \$	964 CGTTTTCTATGACTTTTAGGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCATGGTG 1023 	8 8
	5 B &	904 ACATTGTCCCCTACTGGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCAA 963 	A 43
	D A	844 ATAGAGAAGGAACACAGGTCTGGCCAGGGACGTGCTGCAATTGGTGCAGGTTTTGAATGCA 903	유 성
	S B &	784 CTTAGAGTTTACAGAAAAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAAA 843 	용 성
) B Q	724 ACAGTGGATAAAAAACAGTCCTTCAAGTCTTCTCTGTTTTTATTCTTCAACTCTCACTTT 783	유 성
	Db Q	TITGGGACTTTGATAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAG 7	유 성
1684 TGCGAACCGTGGCACACGCTCATAGTTCTAGCTGCTTGGGAGGTTGAGGAGGAGGATGG	Qy dd	604 GCTTCGGCGCATCCTTTTGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTAC 663	유성

```
ARCSSILF 4
ARCS XX
ARCE 1
ARCE XXX
ARCE 1
ARCH ARCE XXX
ARCE 1
AR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  맑
                                                                                                                                              The present invention describes an activation-induced cytidine deaminase (AID). AID structurally relates to an RNA editing enzyme APOBEC-1 and has cytidine activity similar to APOBEC-1. AID has antiallergic, antianaemic, antiastimatic, ophthalmological, anti-HIV and dermatological activities, and can be used in gene therapy. AID polynucleotides are useful in control for identifying drugs for the treatment of B cell associated immune system disorders, immunodeficiency disease and allergies, such as cimmunoglobulin A (IgA) deficiency disease, IgA nephritis, gamma-cytic collinaemia, atopic dermatitis, allergic collitis, asthma, food allergy, allergic rhinitis, Rosen disease, DiGeorge disease, ataxia common variable immunodeficiency disease, MIDS (auto immunodeficiency syndrome), elevated IgB disorder, MHC (major immunodeficiency syndrome), elevated IgB disorder, and IgG subclass selection disorder. The DNA sequences encoding AID may be used for gene therapy and the antibodies to the AID protein may be used for dispnosis and treatment of these disorders. The present sequence represents a
  Query Match
Best Local Similarity
Matches 2177; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29-MAR-1999;
24-JUN-1999;
27-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              immune related disease; allergy; allergic disease; antiallergic; antianaemic; antiasthmatic; ophthalmological; anti-HIV; dermatological; gene therapy; B cell associated immune system disorder; food allergy; immunodeficiency disease; immunoglobulin A deficiency disease; asthma; IgA nephritis; gamma-globulinaemia; atopic dermatitis; allergic colitis; drug allergic allergic rhinitis; Rosen disease; DiGeorge disease; AIDS; ataxia telangiectasia; common variable immunodeficiency disorder; major histocompatibility class II deficiency disease; auto immunodeficiency syndrome; IgG subclass selection disorder; ds.
                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 17; Page 145-150; 174pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                target for drug
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nucleic acid encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2000-611715/58.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Activation-induced cytidine deaminase; AID;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 05-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAC55314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (HONJ/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          05-OCT-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human activation-induced cytidine deaminase genomic DNA SEQ ID NO:10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28-MAR-2000; 2000WO-JP001918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200058480-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JAPAN
HONJO
                                                                                          6564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Muramatsu
                                                                                                                                   sequence of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                        BP; 1909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOBACCO INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99JP-00087192.
99JP-00178999.
99JP-00371382.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                development
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA;
                    77.2%;
99.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              activation induced cytidine deaminase, useful opment for immune-related diseases including
                                                                                     A; 1358 C; 1383 G; 1914
                                                                                                                                   human AID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6564
Score 2174.6;
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2791
                                          DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cytidine deaminase;
4.
                                          ω
~•
                                                                                     Η.
                                                                                        0
Indels
                                          Length
                                                                                     ۲,
                                                                                        0
                                                                                     Other;
<u>.</u>
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       96
0,
                      맑
                                                          Ś
                                                                                                          片
                                                                                                                                         δ
                                                                                                                                                                                                B
                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                             멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                             1637
                                                                                                          4695
                                                                                                                                                   1577
                                                                                                                                                                                                4635
                                                                                                                                                                                                                                                                                      4575
                                                                                                                                                                                                                                                                                                                              1457
                                                                                                                                                                                                                                                                                                                                                                         4515
                                                                                                                                                                                                                                                                                                                                                                                                                    1397
                                                                                                                                                                                                                                                                                                                                                                                                                                                               4455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3795
                                                                                                                                                                                                                                           1517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 737
                                             GTATATTAACTATATAAGAGAGAGTTGTGACAAAACAGAATGATAAAGCTGCGAACCGTGGC
                                                                                                                                AAGTTGCTTGAATGTTGGGGAGAGAGGAAAATCTATTGGCTCTCGTGGGTCTCTTCATCTCA
                                                                                                                                                                                                                                                                                                                                                                                                  TAATAATGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAACGCAAACCTCTTTTAAGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GATTTTTCTATTCTTTTCCCTTGACGTTTACTTTCAAGTAACACAAACTCTTCCATCAGG
                                                                                                                                                                                                                                                                                   GTCCCTAATTTAGAAACACCCCACAAACTTCACATATCATAATTAGCAAACAATTGGAAGG
                                                                                                                                                                                                                                                                                                                          GTCCCTAATTTAGAAACACCCCACAAACTTCACATATCATAATTAGCAAACAATTGGAAGG
                                                                                                                                                                                                                                                                                                                                                                         TAATAATGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAAACGCAAACTCTTTTAAGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTTCAAGCTACTTTAATAAAGGATCTTAAAATGGGCAGGAGGACTGTGAACAAGACACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTTCAAGCTACTTTAATAAAGGATCTTAAAATGGGCAGGAGGACTGTGAACAAGACACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCCAAAGCATTAATATCCAATCATGCGCTGTATGTTTTAATCAGCAGAAGCATGTTTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCAAAGCATTAATATCCAATCATGCGCTGTATGTTTTAATCAGCAGAAGCATGTTTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCATGATCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTGACCCCAAACCATCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCATGATCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTGACCCCCAAACCATCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GATTTTTCTATTCCTTTTCCCTTGACGTTTACTTTCAAGTAACACAAACTCTTCCATCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTTTTAGGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCATGGTGAGAGGATCAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTTTTGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTGA
                                                                                                          AAGTTGCTTGAATGTTGGGGAGAGGAAAATCTATTGGCTCTCGTGGGTCTCTTCATCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTTTTATATCAACATCCTTTATTATTTGATTCATTTGAGTTAACAGTGGTGTTAGTGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTTTTATATCAACATCCTTTATTATTTGATTCATTTGAGTTAACAGTGGTGTTAGTGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTTTTAGGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCATGGTGAGAGGATCAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCAACGTTTTTCTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCAACGTTTTTCTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACAGGTCTGGCCAGGACGTGCTGCAATTGGTGCAGTTTTGAATGCAACATTGTCCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACAGGTCTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGCAACATTGTCCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAAAAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAAAATAGAGAAGGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAAAAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAAAATAGAGAAGGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AACAGTCCTTCAAGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AACAGTCCTTCAAGTCTTCTGTTTTTATTCTTCAACTCTCACTTTCTTAGAGTTTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTACAGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTGA
                                                                                                                                                   1636
                                                                                                                                                                                                                                        1576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    . 1096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3914
                                                               1696
                                                                                                          4754
                                                                                                                                                                                                4694
                                                                                                                                                                                                                                                                                   4634
                                                                                                                                                                                                                                                                                                                              1516
                                                                                                                                                                                                                                                                                                                                                                         4574
                                                                                                                                                                                                                                                                                                                                                                                                                    1456
                                                                                                                                                                                                                                                                                                                                                                                                                                                               4514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4274
```

```
4935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4875
                                                                                                                                                                                                                                                                                                                                                                              5535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4815
                                                                                                              2657
                                                                                                                                                   5715
                                                                                                                                                                                        2597
                                                                                                                                                                                                                             5655
                                                                                                                                                                                                                                                                                                                                         2477
                                                                                                                                                                                                                                                                                                                                                                                                                 2417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1697
                                                                                                                                                                                                                                                               2537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACACGCTCATAGTTCTAGCTGCTTGGGAGGTTGAGGAGGGATGGCTTGAACACAGGT
                                                                                                                                                                                                                                                                                                                                 CTAATGATTTTTTATTAACATGATTTCCTTTTCTGATATTGAAATGGAGTCTCAAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGATCCACAGGAAAACTTGAATGCACAAACTGTCTTATTTAATCTTATTGTACATAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTCAGAATAACCATATCCCTGTGCCGTTATTACCTAGCAACCCTTGCAATGAAGATGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TATTTGTCTCTTTTGGTGTCTATTTGTCCCTAACAACTGTCTTTGACAGTGAGAAAAATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGCATTGCAAGGAAATTGTGCTTTATCCAACAAAATGTAAGGAGCCAATAAGGGATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAAAAAAAAAAAAAAAGAGAGAGAGAGAGAGAAGAGAATATTTTGGGAGAGAAAGGATGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAGAACTCTGTCTCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCCAGGAGGTGGAGGTTGCAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCCCGTCTGTACTCAAAAATGCAAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCCCGTCTGTACTCAAAATGCAAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTTGAGACCAGCCTGGCCAACATGGCAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAGAAAGAGAGAGGCCGGGCGTGGTGCTCACGCCTGTAATCCCAGCACTTTGGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAGAAAGAGAGAGAGGCCGGGCGTGGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGTAATGGTGCTACGAAGCCATTTCTCTTGATTTTAGTAAACTTTTATGACAGCAAATT
                                                                                                                                                                                                                                                                                                    CTAATGATTTTTATTAACATGATTTCCTTTTCTGATATATTGAAATGGAGTCTCAAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                 TGTAAAAGAGTTAAAAATTGTTACTTCATGTATTCATTTATATTTTATATTTTTGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGATCCACAGGAAAACTTGAATGCACAACTGTCTTATTTTAATCTTATTGTACATAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATTTGTCTCTTTTGGTGTCTATTTGTCCCTAACAACTGTCTTTGACAGTGAGAAAAATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGCATTGCAAGGAAATTGTGCTTTATCCAACAAAATGTAAGGAGCCAATAAGGGATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>AAAAAAAAAAAAAAGAGAGAGAGAGAAAGAGAACAATATTTGGGAAGAAGGATGGGG</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAGACTCTGTCTCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGAGGTGGAGGTTGCAGTA
                                                                         AGTAATGGTGCTACGAAGCCATTTCTCTTGATTTTTAGTAAACTTTTATGACAGCAAATT
                                                                                                                                                                                                                           TTCATAAATTTATAACTTTAGAAATGATTCTAATAACAACGTATGTAATTGTAACATTGC
                                                                                                                                                                                                                                                             TTCATAAATTTATAACTTTAGAAATGATTCTAATAACAACGTATGTAATTGTAACATTGC
                                                                                                                                                                                                                                                                                                                                                                              TGTAAAAGAGTTAAAAATTGTTACTTCATGTATTCATTTATATTTTATATTTTGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCAGAATAACCATATCCCTGTGCCGTTATTACCTAGCAACCCTTGCAATGAAGATGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4874
                                                                                                                                                   5774
                                                                                                                                                                                      2656
                                                                                                                                                                                                                                                                                                  5654
                                                                                                                                                                                                                                                                                                                                       2536
                                                                                                                                                                                                                                                                                                                                                                                                               2476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1756
5894
                                    2776
                                                                         5834
                                                                                                            2716
                                                                                                                                                                                                                           5714
                                                                                                                                                                                                                                                             2596
                                                                                                                                                                                                                                                                                                                                                                            5594
                                                                                                                                                                                                                                                                                                                                                                                                                                                      5534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2176
```

멍 8

밁 8 Ş

B S 밁 Ş 밁 S 밁

밁

```
吊
5895
TATGATGGAATAAACTTGAGA
5915
```

ARESULT 5
AAC55339
IID AAC55339
IID AAC55339
IID AAC55339
AXX AAC5
XX AAC6
XX AAC55339 Human activation-induced cytidine deaminase genomic DNA SEQ ID standard; (first entry) DNA; 11204

NO:35.

밁

Ş

S

S 맑

8 밁 밁

S

밁

5

밁

S

Activation-induced cytidine deaminase; AID; cytidine deaminase; immune related disease; allergy; allergic disease; antiallergic; antianaemic; antiasthmatic; ophthalmological; anti-HIV; dermatological; gene therapy; B cell associated immune system disorder; food allergy; immunodeficiency disease; immunoglobulin A deficiency disease; asthma; IgA nephritis; gamma-globulinaemia; act dermatitis; allergic colitis; drug allergy; allergic rhinitis; Rosen disease; DiGeorge disease; AIDS; ataxia telangiectasia; common variable immunodeficiency disorder; ataxia telangiectasia; common variable immunodeficiency disorder; anajor histocompatibility class II deficiency disease; immunodeficiency syndrome; IgG subclass selection disorder;

sapiens.

WO200058480-A1

05-OCT-2000

28-MAR-2000; 2000WO-JP001918

29-MAR-1999; 24-JUN-1999; 27-DEC-1999; 99JP-00087192. 99JP-00178999. 99JP-00371382.

JAPAN HONJO TOBACCO INC

Honjo Muramatsu 3

WPI; 2000-611715/58

Nucleic acid target for drug development encoding activation induced cytidine deaminase, useful opment for immune-related diseases including as рJ

Claim 17; Page 163-170; 174pp; Japanese

The present invention describes an activation-induced cytidine deaminase (AID). AID structurally relates to an RNA editing enzyme APOBEC-1 and has cytidine activity similar to APOBEC-1. AID has antiallergic, antianemic, antiansthmatic, ophthalmological, anti-HIV and dermatological activities, and can be used in gene therapy. AID polynucleotides are useful in methods for identifying drugs for the treatment of B cell associated immune system disorders, immunodeficiency diseases and allergies, such as cimmunoglobulin A (IgA) deficiency diseases and allergies, such as cimmunoglobulina, atopic dermatitis, allergic colitis, asthma, food allergy, allergic rhinitis, Rosen disease, Digeorge disease, ataxia telangiectasia, common variable immunodeficiency disease, AIDS (auto immunodeficiency syndrome), elevated IgE disorder, MHC (major chistocompatibility class) class II deficiency disease, AIDS (auto the AID protein disease). The DNA sequences encoding AID may be used for gene conditions and the antibodies to the AID protein may be used for diagnosis and treatment of these disorders. The present sequence represents a condition of the present sequence of human AID

Sequence 뫈; 3305 P. 2273 ü 2373 ດ Η. 0 U; 0

Query Match Best Local Similarity Matches 2177; Conserv 77.2%; <u>.</u> Score 2174.6; Pred. No. 0; 멂 ω --Length 11204; <u>.</u> Gaps 0

á 밁 8 맑 S B 8 В δ 뮹 S

1517 AAGTIGCTIGAATGTIGGGGAGAGAAAATCTATIGGCTCTCGTGGGTCTCTCATCTCA	1397 TAATAATGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAACGCAAACTCTTTTAAGGAA 1456	137 CTTCAAGCTACTTTAATAAAGGATCTTAAAATGGGCAGGAGGACTGTGAACAAGACACCC 9729	CCATGATCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTGACCCCCAAACCATCTC 954 ICCAAAGCATTAATATCCAATCATGGGCTGTATGTTTTAATCAGCAGAAGCATGTTTTTA 127	1097 GATTTTCTATTCTTTTCCCTTGACGTTTACTTTCAAGTAACACAAACTCTTCCATCAGG 1156	9310 CTTTTAGGTAGGATGAGACAGAAGGTAGATCCTAAAAAGCATGGTGAGAGGATCAAATG 9369 1037 TTTTTATATCAACATCCTTTATTATTTGATTCATTTGAGTTAACAGTGGTGTTAGTGATA 1096	917 CTGGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCAACGTTTTTCTATGA 976		AACAGICCTICAAGICTICTCTGITTITAAAAAGAICTATGTCTIGAAAATAGAGAAGGAAC GAAAAAATATTITATATACGACTCTTTAAAAAGAICTATGTCTTGAAAATAGAGAAGGAAC GAAAAAATATTITATATACGACTCTTTAAAAAGAICTATGTCTTGAAAATAGAGAAGGAAC		617 CTTTTGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTGA 676
		<u> </u>								-
5 B 5 B 5 B 5	\$ \$ \$ \$;	8 8 8	\$ B \$ 8	\$ \$ \$ \$	B 54 B	Q D Q	d V	8 8 8	중 음 중	B &
259 AGIANIGGICCIACHAGCCAITTCTCITCAITTTAIGACAGCAAATI 2556 [11111111111111111111111111111111111	TTCATAAATTTTATTAACATGATTTCCTTTTCTGATATATTGAAATGGAGTCTCAAAGC TTCATAAAATTTTATTAACATGAATTGATTCCTAATAACAACGTATGGAGTCTCAAAGC TTCATAAAATTTTATAAACTTTAGAAATGATTCTAATAACAACGTATGTAACATTGGC	10690 AGATCCACAGGAAAACTIGAATGCACCACCACTGTCTATTTTAATCTTATTGTACATAAGTT 1074 2417 TGTAAAAGAGTTAAAAATTGTTACTTCATGTATTTTATATTTTATTATTATTATTTTGCGT 2476 2417 TGTAAAAGAGTTAAAAATTGTTACTTCATGTATTCATTTATATTTTATATTATTTTTGCGT 1080 10750 TGTAAAAGAGTTAAAAATTGTTACTTCATGTATTCATTTATTT	2297 TTCAGAATAACCATATCCCTGTGCCGTTATTACCTAGCAACCTTTGAATGAA	AGCATTGCAGGAANTTGTGCTTATCCAACAAATCTAAGGACCAATAAGGATCCC	AGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAGAGCTCTGTCTCAGAAAAAAAA	1997 AGCTACTTGGGAGGCTGAGGCAGGAGATCGCTTGAACCCAGGAGGTGGAGGTTGCAGTA 2056 10330 AGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGAGGTGGAGGTTGCAGTA 10389 2057 AGCTGAGTCGTGCCGTTGCACCTCGAGCCTGGGCGAAGACTCTGTCTCAGAA 2116	1937 CCCCGTCTGTACTCAAAATGCAAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAATCCC 1996 	10150 AAGAAAGAGGAGGCCGGGCGGGCCCGGTAATCCCAGCCATTTGGGAGGC 10209 1877 CGAGCCGGGGGATCACCCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACAATGGCAAAA 1936	1757 GTTCAAGGCCAGCCTGGGCAACATAACAAGATCCTGTCTCTCAAAAAAAA	1697 ACACGCTCATAGTTCTAGCTTGGGAGGTTGAGGAGGAGGAGGATGGCTTGAACACAGGT 1756

g

유 성 유

Ş

B 8 B 8

음 성

유 성

유 성

B 성

음 성

B 8 B 8

유 성

B & B &

```
맑
                                                                                                               The invention describes a method of treating genetically-defined disease CC associated with chromosomal aberrations yielding oncogenic fusion CC proteins (I), treating cancerous cells containing (I) in a heterogeneous Ccell population, treating proliferative diseases associated with mutant protein or cellular protein isoforms (II) dependent on heat shock protein CC (HSP)-90, or selectively treating cells expressing (II) involving administering HSP90-inhibitor. The method is useful for treating CC genetically-defined disease with chromosomal aberration yielding CC oncogenic fusion protein, treating cancerous cells containing fusion CC protein in heterogeneous cell population, treating proliferative disease CC (e.g. rheumatoid arthritis or cancer) associated with mutant protein or cellular protein isoform dependent on heat shock protein (HSP)-90 (e.g. p53), or selectively treating cells expressing mutant protein or cellular CC protein isoform in a patient heterozygous for (II). The method is useful CC protein isoform in a patient heterozygous for (II). The method is useful CC protein isoform myeloid leukaemia (CML), APL, AML, NHL and CMML, CT a disease characterised by a solid tumour such as papillary thyroid CC arcinoma, Ewing's sarcoma, melanoma, liposarcoma, rhabdomyosarcoma and CC infections. This represents the DNA sequence of a chromosome aberration
                   Best Local Similarity Matches 2177; Conserv
                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chromosome aberration; oncogenic fusion protein; cancer; proliferative disease; cellular protein isoform; heat shock protein 9; HSP-90; rheumatoid arthritis; cancer; haematopoiettc disorder; T cell lymphona; B cell lymphoma; chronic myeloid leukaemia; CML; acute myeloid leukaemia; AML; chronic myelomonocytic leukaemia; CMML; acute lymphoblastic leukaemia; ALL; APL; NHL; solid tumour; papillary thyroid carcinoma; Ewing's sarcoma; melanoma; liposarcoma; rhabdomyosarcoma; synovial sarcoma; viral infection; gene; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Treating genetically-defined disease associated with chromosomal aberrations yielding oncogenic fusion proteins, e.g. cell proliferative diseases, involves administering an inhibitor of heat shock protein 90.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Page 242-245; 389pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-MAR-2001; 2001US-0272751P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-MAR-2002; 2002WO-US006518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12-SEP-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200269900-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            04-DEC-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABS73286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (CONF-) CONFORMA THERAPEUTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABG95082.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                standard; DNA; 11204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATGATGGAATAAACTTGAGA 11130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Burrows
                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       human translocation del(12p) protein
                                                                                      BP;
                                                                                    3305 A; 2273 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           entry)
                                 77.2%;
99.8%;
                   Score 2174.6;
Pred. No. 0;
0; Mismatches
                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORP
                                                                                      2373
                                                                                      <u>ດ</u>
                                                                                    3253 T;
                                                      BB
                                                     9
                     Indels
                                                   Length 11204;
                                                                                    0 U; 0 Other;
                 0;
                   Gaps
                     0
S
                                   ₽
                                                                 Ś
                                                                                                    В
                                                                                                                               5
                                                                                                                                                                      밁
                                                                                                                                                                                                    $
                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                     $
                                                                                                                                                                                                                                                                                                            문
                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                              1397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8950
                                     9970
                                                                     1637
                                                                                                        9910
                                                                                                                                        1577
                                                                                                                                                                        9850
                                                                                                                                                                                                         1517
                                                                                                                                                                                                                                           9790
                                                                                                                                                                                                                                                                           1457
                                                                                                                                                                                                                                                                                                              9730
                                                                                                                                                                                                                                                                                                                                                                                9670
                                                                                                                                                                                                                                                                                                                                                                                                               1337
                                                                                                                                                                                                                                                                                                                                                                                                                                                   9610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 617
   ACACGCTCATAGTTCTAGCTGCTTGGGAGGTTGAGGAGGAGGATGGCTTGAACACAGGT
                                                            GTATATTAACTATAAGAGAGTTGTGACAAAACAGAATGATAAAGCTGCGAACCGTGGC
                                                                                                        GAAATGCCAATCAGGTCAAGGTTTGCTACATTTTGTATGTGTGATGCTTCTCCCCAAAG
                                                                                                                               AAGTTGCTTGAATGTTGGGGAGAGGGAAAATCTATTGGCTCTCGTGGGTCTCTTCATCTCA
                                                                                                                                                                                                AAGTTGCTTGAATGTTGGGGAGAGGAAAATCTATTGGCTCTCGTGGGTCTCTTCATCTCA
                                                                                                                                                                                                                                           GTCCCTAATTTAGAAACACCCACAAACTTCACATATCATAATTAGCAAACAATTGGAAGG
                                                                                                                                                                                                                                                                           GTCCCTAATTTAGAAACACCCACAAACTTCACATATCATAATTAGCAAACAATTGGAAGG
                                                                                                                                                                                                                                                                                                                                              TAATAATGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAACGCAAACTCTTTTAAGGAA 1456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCATGATCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTGACCCCAAACCATCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATTTTTCTATTCTTTTCCCTTGACGTTTACTTTCAAGTAACACAAACTCTTCCATCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GATTTTTCTATTCTTTTCCCTTGACGTTTACTTTCAAGTAACACAAACTCTTCCATCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTTTTATATCAACATCCTTTATTATTTGATTCATTTGAGTTAACAGTGGTGTTAGTGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTTTTAGGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCATGGTGAGAGGATCAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTTTTAGGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAAGCATGGTGAGAGAGTCAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCAACGTTTTTCTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACAGGTCTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGCAACATTGTCCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACAGGTCTGGCCAGGGACGTGCTGCAATTTGGTGCAGTTTTTGAATGCAACATTGTCCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAAAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAAAATAGAGAAGGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAAAAAATATTATATACGACTCTTTAAAAAGATCTATGTCTTGAAAATAGAGAAGGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AACAGTCCTTCAAGTCTTCTCTGTTTTTTTTTCTTCAACTCTCACTTTCTTAGAGTTTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AACAGTCCTTCAAGTCTTCTCTGTTTTTATTCTTCAACTCTCACTTTCTTAGAGTTTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTACAGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTTTTGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTGA
                                     GTATATTAACTATATAAGAGAGTTGTGACAAAACAGAATGATAAAGCTGCGAACCGTGGC
                                                                                                                                                                                                                                                                                                                                                                                CTTCAAGCTACTTTAATAAAGGATCTTAAAATGGGCAGGAGGACTGTGAACAAGACACCC
                                                                                                                                                                                                                                                                                                                                                                                                                 CTTCAAGCTACTTTAATAAAGGATCTTAAAATGGGCAGGAGGACTGTGAACAAGACACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCAAAGCATTAATATCCAATCATGCGCTGTATGTTTAATCAGCAGAAGCATGTTTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCAACGTTTTTCTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCAAAGCATTAATATCCAATCATGCGCTGTATGTTTTAATCAGCAGAAGCATGTTTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCATGATCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTGACCCCCAAACCATCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTTTTATATCAACATCCTTTATTATTTGATTCATTTGAGTTAACAGTGGTGTTAGTGATA
                                                                                                                                                                                                                                                                                                              CTTTTAAGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9009
                                                                                                        9969
                                                                                                                                                                         9909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9069
                                                                                                                                          1636
                                                                                                                                                                                                         1576
                                                                                                                                                                                                                                           9849
                                                                                                                                                                                                                                                                            1516
                                                                                                                                                                                                                                                                                                              9789
                                                                                                                                                                                                                                                                                                                                                                                 9729
                                                                                                                                                                                                                                                                                                                                                                                                                 1396
                                                                                                                                                                                                                                                                                                                                                                                                                                                   9669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 676
                                     10029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         856
```

```
10270
                                                                                                                                                                                                                                                                                                                                                           10810
                                                                                                                                                                                                                                                                                                                                                                                                                                        10750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10030
                                                                                                                                                                                                                                                                             10870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1757
    2777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2057
                                                                                                                                                                                                                                                                                                                                                                                 CTAATGATTTTTTATTAACATGATTTCCTTTTCTGATATTGAAATGGAGTCTCAAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGATCCACAGGAAAACTTGAATGCACAACTGTCTTATTTTAATCTTATTTGTACATAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TATGATGGAATAAACTTGAAA 2797
                                                                                                                                              AGTAATGGTGCTACGAAGCCATTTCTCTTGATTTTTAGTAAACTTTTTATGACAGCAAATT
                                                                                                                                                                                                                                                                                                        TTCATAAATTTATAACTTTAGAAATGATTCTAATAACAACGTATGTAATTGTAACATTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGTAAAAGAGTTAAAAATTGTTACTTCATGTATTCATTTATATTTTATATTATTTTTGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTCAGAATAACCATATCCCTGTGCCGTTATTACCTAGCAACCCTTGCAATGAAGATGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTCAGAATAACCATATCCCTGTGCCGTTATTACCTAGCAACCCTTGCAATGAAGATGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATTTGTCTCTTTTGGTGTGTCTATTTGTCCCTAACAACTGTCTTTGACAGTGAGAAAAATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCCCGTCTGTACTCAAAATGCAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAATCCC 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAGAAAGAGAGAGGCCCGGGCGTGGTGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGTAATGGTGCTACGAAGCCATTTCTCTTGATTTTTAGTAAACTTTTATGACAGCAAATT
                                                                                                                                                                                                                                                                           TTCATAAATTTATAACTTTAGAAATGATTCTAATAACAACGTATGTAACTTGTAACATTGC
                                                                                                                                                                                                                                                                                                                                                        CTAATGATTTTTTATTAACATGATTTCCTTTTCTGATATTTGAAATGGAGTCTCAAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                      TGTAAAAGAGTTAAAAATTGTTACTTCATGTATTCATTTATATTTTATATTTTTGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGATCCACAGGAAAACTTGAATGCACAACTGTCTTATTTTAATCTTATTGTACATAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TATTTGTCTCTTTTGGTGTCTATTTGTCCCTAACAACTGTCTTTGACAGTGAGAAAAATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAGCATTGCAAGGAAATTGTGCTTTATCCAACAAATGTAAGGAGCCAATAAGGGATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAGCATTGCAAGGAAATTGTGCTTTATCCAACAAAATGTAAGGAGCCAATAAGGGATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAAAAAAAAAAAAGAGAGAGAGAGAAAGAGAACAATATTTGGGAAGAGAAGGATGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAAAAAAAAAAAAAGAGAGAGAGAGAAAAGAGAACAATATTTGGGAGAGAAGGATGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAGACTCTGTCTCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAGACTCTGTCTCAGAA 2116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCTACTTGGGAGGCTGAGGCAGGAGATCGCTTGAACCCAGGAGGTGGAGGTTGCAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGAGGTGGAGGTTGCAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAGAAAGAGAGAGGGCCGGGCGTGGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGC 1876
                                                                                                                   CACGCCTGTAATCCCAGCACTTTGGGAGGC 10209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . 10389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  . 2056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . 10269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10149
                                                                             2776
                                                                                                                                                        2716
                                                                                                                                                                                                                                     2656
                                                                                                                                                                                                                                                                           10929
                                                                                                                                                                                                                                                                                                              2596
                                                                                                                                                                                                                                                                                                                                                        10869
                                                                                                                                                                                                                                                                                                                                                                                                                                      10809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10449
                                      11109
                                                                                                                   11049
                                                                                                                                                                                              10989
                                                                                                                                                                                                                                                                                                                                                                                               2536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10089
```

밁

8

Ś

밁

Ś

밁

Ś

밁 8 맑 S 밁 밁 Ś B S 문

8

```
밁
11110 TATGATGGAATAAACTTGAGA 11130
```

ARCSSILF 7
ARCSSILP 1
ARCSSILP 1
ARCSSILP 1
ARCSSILP 2
ARCS XX
ARC ARCS XX
ARC MW immun KW im Activation-induced cytidine deaminase; AID; cytidine deaminase; immune related disease; allergy; allergic disease; antiallergic; antianaemic; antiasthmatic; ophthalmological; anti-HIV; dermatological; gene therapy; B cell associated immune system disorder; food allergy; immunodeficiency disease; immunoglobulin A deficiency disease; asthma; IGA mephritis; gamma-globulinaemia; atopic dermatitis; allergic colitis; drug allergy; allergic rhinitis; Rosen disease; defeorge disease; AIDS; major histocompatibility class II deficiency disease; major histocompatibility class II deficiency disease; auto immunodeficiency syndrome; IgG subclass selection disorder; ds. 05-FEB-2001 AAC55319; AAC55319 Human activation-induced cytidine standard; (first entry) DNA; 2172 뫈 deaminase exon ຫ SEQ IJ NO:15

Homo sapiens.

WO200058480-A1

05-0CT-2000

28-MAR-2000; 2000WO-JP001918

29-MAR-1999; 24-JUN-1999; 27-DEC-1999; 99JP-00087192. 99JP-00178999. 99JP-00371382.

(NISB) JAPAN TOBACCO INC. (HONJ/) HONJO T.

Muramateu

WPI; 2000-611715/58

Nucleic acid encoding activation induced cytidine deaminase, useful as target for drug development for immune-related diseases including

മ

Claim 18; Page 152-153; 174pp; Japanese.

The present invention describes an activation-induced cytidine deaminase (C (AID). AID structurally relates to an RNA, editing enzyme APOBEC-1 and has C cytidine activity similar to APOBEC-1. AID has antiallergic, antianaemic, antiasthmatic, ophthalmological, anti-HIV and dermatological activities, and can be used in gene therapy. AID polymucleotides are useful in methods for identifying drugs for the treatment of B cell associated immune system disorders, immunodeficiency diseases and allergies, such as immunoglobulin A (IgA) deficiency disease, IgA nephritis, gamma-CC drug allergy, allergic rhinitis, Rosen disease, DiGeorge disease, ataxia CC drug allergy, allergic rhinitis, Rosen disease, DiGeorge disease, ataxia CC drug allergy, class) class II deficiency disease, AIDS (auto memonodeficiency syndrome), elevated IgE disorder, and IgG subclass commonodeficiency syndrome), elevated IgE disorder, and used for gene charapy and the antibodies to the AID protein may be used for diagnosis CC and treatment of these disorders. The present sequence represents the

Sequence 2172 B₽; 702 A; 379 C; 465 G; 626 T; 0 U; 0 Other

Ś 밁 S

δ 뭐 Ś 밁 8 맑 8 В Ś 片 Ś В Ŕ 밁

밁

Query Match Best Local Similarity Matches 2172; Conserv ilarity 100.0%; I
Conservative 0; 77.1%; Score 2172; I 100.0%; Pred. No. 0; Live 0; Mismatches DB ω --0, Length 2172; Indels 0

유정

S

밁

S

음 성 음

2783 GGAATAAACTTG 2794 	.	703	Ϋ́
2723 TACCAANTAAANTAAAAGTGAAGTTATAYGAAGTTAAAATAAAA	QY	μ ω Η—Η	ਲੋਂ ₹
TGGCTCACTTTCAATCACTTAATAAATGATAAATAATTTTGGAAGCTGTGAAGATAAATAA	1642		ਲੋਂ ਵੱ
603 GGTGCTACGAAGCCATTTCTCTTGATTTTTAGTAAACTTTTATGACAGCAAATTTGCTTC 981 GGTGCTACGAAGCCATTTCTCTTGATTTTTAGTAAACTTTTATGACAGCAAATTTGCTTC	1582	1523 CTTGAATGTTGGGGAGAGAAAATCTATTGGCTCTCGTGGGTCTCTTCATCTCAGAAATG	ਲੋਂ ਵੱ
43 AATTYATAACTTTAGAAATGATTCTAATAACAACGTAGTAATTGTAACATTGCAGTAAT 	1522 900	1463 AATTTAGAAACACCCACAAACTTCACATATCATAATTAGCAAACAATTGGAAGGAA	ਲੇ ਵੇ
ATTTTTATTAACATGATTCCTTTTCGATATATTGAAATGGAGTCTCAAAGCTTCATA	1462 840	H—H	ਲੇ ਵੱ
AGAGTTAAAAATGTTACTTCATGTATTCATTTATATTTTATATTATTTTGCGTCTAATG	Oy 	1343 GCTACTITAATAAAGGATCTTAAAATGGGCAGGAGGACTGTGAACAAGACAACCCTAATAA 	ਲੇ ਵ
ACAGGAAACTTGAATGCACAACTGTCTTATTTAATCTTATTGTACATAGGTTTGTACA	1342	1283 TACAAAAGAAGATGTTATGGGTGGGGATGGAGGTATAGACCATGCATG	₽ ⋖
ATTACCATATCCCTGTGCCGTTATTACCTAGCAACCCTTGCAATGAAGATGAGCAGATCC	1282	1223 GCATTAATATCCAATCATGCGCTGTATGTTTTAATCAGCAGAAGCATGTTTTTATGTTTG	ъ «
	CCAAACCATCTCTCCAAA 1222	1163 TCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTGACC	ਲ ਵ
CAMAGEMAA I GEGET I IA I CHARLAMANI GI MAGEMECCAA IMAGEMECCAA IMAGEMECAA IM	CTCTTCCATCAGGCCATGA 1162	1103 TCTATTCTTTTCCCTTGACGTTTACTTTCAAGTAACACAAAC	8 4
AAAAAAAAAGAGAGAGAGAGAAAAGAGAAATATTTGGGAGAGAAGA	1102	1043 TATCAACATCCTTTATTATTTGATTCATTTGAGTTAACAGTGGTGTTAGTGATAGATTTT	ъ ч
2063 GATICGTTCLCACTTCLAGCCTGGGCGACAAGACTACTGTCTCAGAAAAAAAA 2122	TGTTTTTA 1042	983 GGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCATGGTGAGAGGATCAAA 	ט ע
, p (CTATGACTTTTA 982 CTATGACTTTTA 360	923 ATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCAACGTTTTT	ĕ ⊀
	CCCCTACTGGGA 922 CCCTACTGGGA 300	863 CTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGCAACATTGT	ט א
GGGCGATCACCTGTGGTCAGGAGGTTGAGAACGCCGGT 	CACAGGT 862	803 ATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAAAATAGAGAAGGAAG	ъ ч
GAGAGAGGCCGGGCCGGCCCGGCCCGGCCTGTAATCCCAGCACTTTGGGAGGCCGAGCCCGAGCCCGAGCCCGAGCCCGAGCCCGAGCCCGAGCCCGAGCCCGAGCCCGAGCCCGAGCCCGAGCCCGAGCCCGAGCCCGAGCCCGAGCCCGAGCCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCAGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCCGAGCAGC	CAGAAAAA 802 CAGAAAAA 180	743 CCTTCAAGTCTTCTCTGTTTTATTCTTCAACTCTCACTTTCTTAGAGTTTA 	8 4
TO SUCCESCE TO SUCCESCENTAL CARRACTE TO TEST CANADADADADADADADADADADADADADADADADADADA	742	683 CTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAAAAACAGT	σ <
081	60 60	623 CCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTGATAGCAA	8 4

밁

```
片
   Ś
                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                        The invention relates to human polynucleotides and the polypeptides they cancode. The polynucleotides and polypeptides are useful in diagnostics, forensics, gene mapping, medical imaging, identification of mutations responsible for genetic disorders or other traits, assessing biodiversity and producing many other types of data and products dependent on DNA and manno acid sequences. They are also useful for preventing, treating or ameliorating medical conditions, such as cancer, neurodegenerative disorders (e.g. Parkinson's disease, Alzheimer's disease), lymphoid cell disorders (e.g. Parkinson's disease, Alzheimer's disease), lymphoid cell disorders, osteoporosis, osteoarthritis, bone degenerative disorders, periodontal disease, liver fibrosis, infections (e.g. viral, fungal or bacterial) or autoimmune diseases (e.g. diabetes, atopic dermatitis). Sequences ABX04986-ABX05511 represent human polynucleotides of the invention. Note: The sequence data for this patent is not represented in the printed specification but is based on sequence information supplied by the printed specification but is based on sequence information supplied
                                                                                         Query Match
Best Local Similarity
Matches 1542; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tang
'e AU,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                New isolated polypeptides and polynucleotides, useful for preventing, treating or ameliorating medical conditions, such as cancer, neurodegenerative disorders, lymphoid cell disorders, bone degenerating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; gene; ss; genetic disorder; gene mapping; medical imaging; cancer; neurodegenerative disorder; lymphoid cell disorder; osteoporosis; Parkinson's disease; Alzheimer's disease; bone degenerative disorder; osteoarthritis; periodontal disease; liver fibrosis; viral infection; fungal infection; bacterial infection; autoimmune disease; diabetes;
                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2003-040556/03.
P-PSDB; ABU00390.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                atopic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14-MAR-2002; 2002WO-US005109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17-JAN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Wehrman T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26-SEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200274961-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABX05468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15-MAR-2001; 2001US-00810173
                                                                                                                                                                               printed specification but
the European Patent Office
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2161
    64
                                 N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   dermatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     , Zhou P,
Yang Y,
T, Wang J
                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 483; 235pp;
    CACTCTGGACACCATATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAATT
                                                           GAACCATCATTAATTGAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGGAGGCAAGAAGA
                                                                                                                                                    1543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAATAAACTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                       and infections.
                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         polymucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first
                                                                                                                                                    BP; 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Goodrich R, Asundi V,
Ma Y, Yamazaki V, Chen
, Wang D, Drmanac RT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cDNA; 1543
                                                                                                      54.7%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Wang
                                                                                                                                                   A; 334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2172
                                                                                          0
                                                                                                      Score 1542; DB 7;
Pred. No. 1.2e-258;
                                                                                                                                                   C; 352
                                GAGATTTTTCTGGCCTGAGACTTGCAGGGAGGCAAGAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                        English
                                                                                          Mismatches
                                                                                                                                                   G; 429
                                                                                                                                                   T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Zhang J,
1 R, Wang
                                                                                                                                                   U; 0 Other;
                                                                                                                    Length 1543;
                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ņ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zhao QA,
Z, Ghosh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     degenerative
                                                                                         .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ren
                                                                                         Gaps
    123
                                9
                                                             63
                                                                                          0
               S
                                              밁
                                                                      Ś
                                                                                                      밁
                                                                                                                             8
                                                                                                                                                                 밁
                                                                                                                                                                                     S
                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        맑
                  1144
                                               1082
                                                                                                        1022
                                                                                                                                    1024
                                                                           1084
                                                                                                                                                                  962
                                                                                                                                                                                               964
                                                                                                                                                                                                                                                                                       842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        242
                                                                                                                                                                                                                             902
                                                                                                                                                                                                                                                       904
                                                                                                                                                                                                                                                                                                                   844
                                                                                                                                                                                                                                                                                                                                              782
                                                                                                                                                                                                                                                                                                                                                                           784
                                                                                                                                                                                                                                                                                                                                                                                                         722
                                                                                                                                                                                                                                                                                                                                                                                                                                    724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTCTTCCATCAGGCCATGATCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTGAC
                                                                GGTGTTAGTGATAGATTTTTCTATTCTTTTTCCCTTTGACGTTTACTTTCAAGTAACACAAA
                                                                                                                          AGAGGATCAAATGTTTTATATCAACATCCTTTATTATTATTTGATTCATTTGAGTTAACAGT
                                                                                                                                                                                     CGTTTTTCTATGACTTTTAGGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCATGGTG
                                                                                                                                                                                                                                                  ACATTGTCCCCTACTGGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AATAGCCATCATGACCTTCAAAGATTATTTTTACTGCTGGAATACTTTTTGTAGAAAACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCGTGACAGTGCTACATCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CACTCTGGACACCACTATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAATT
                                                                                                                                                                  CGTTTTTCTATGACTTTTAGGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCATGGTG
                                                                                                                                                                                                                             ACATTGTCCCCTACTGGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCAA
                                                                                                                                                                                                                                                                                     ATAGAGAAGGAACACAGGTCTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGCA
                                                                                                                                                                                                                                                                                                           ATAGAGAAAGGAACACAGGTCTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGCA
                                                                                                                                                                                                                                                                                                                                                CTTAGAGTTTACAGAAAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                          CTTAGAGTTTACAGAAAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                      ACAGTGGATAAAAAACAGTCCTTCAAGTCTTCTCTGTTTTTATTCTTCAACTCTCACTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTTGGGACTTTGATAGCAACTTCCAGGAATGTCACACGATGAAATATCTCTGCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTTGGGACTTTGATAGCAACTTCCAGGAATGTCACACGATGAAATATCTCTGCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTTCGGCGCATCCTTTTGCCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCTTCGGCGCATCCTTTTGCCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGAAAGAACTTTCAAAGCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTCTCCAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTACCGCGTCACCTGGTTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCACGTGGAATTGCTCTTCCTCCGCTACATCTCGGACTGGGACCTAGACCCTGGCCGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGTGTTAGTGATAGATTTTTCTATTCTTTTCCCTTGACGTTTACTTTCAAGTAACACAAA
                                                                                                        AGAGGATCAAATGTTTTTATATCAACATCCTTTATTATTTGATTCATTTGAGTTAACAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGAAAGAACTTTCAAAGCCTGGGAAGGGGCTGCATGAAAATTCAGTTCGTCTCTCCAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AATAGCCATCATGACCTTCAAAGATTATTTTTACTGCTGGAATACTTTTGTAGAAAACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCACGTGGAATTGCTCTTCCTCCGCTACATCTCGGACTGGGACCTAGACCCTGGCCGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCGTGACAGTGCTACATCCTTTTCACTGGACTTTTGGTTATCTTCGCAATAAGAACGGCTG
                                               1141
                                                                                                                                                                                                                           961
                  1203
                                                                                                        1081
                                                                                                                                     1083
                                                                                                                                                                  1021
                                                                                                                                                                                                                                                                                                                                                841
                                                                                                                                                                                                                                                                                                                                                                           843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                        963
                                                                                                                                                                                                                                                                                       901
                                                                                                                                                                                                                                                                                                                                                                                                          781
                                                                                                                                                                                                                                                                                                                                                                                                                                      783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
```

•			
** * * * * * * * * * * * * * * * * * * *	χ O	p	40 40 40 40 40
- JAN- - FEB - FEB	T 9 088 AAK81088 standard; DNA; 166 AAK81088; 07-NOV-2001 (first entry) Human immune/haematopoietic Human; immune; haematopoiet cytostatic; gene therapy; v Homo sapiens. WO200157182-A2. 09-AUG-2001, 2001WO-US00135	1324 CATGCATGGTCACCTTCAAGCTACTTTAATAAAGGATCTTAAAATGGGCAGGACGACTGT 1383	1142 CTCTTCCATCAGGCCATGATCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTTGAC 1201 1204 CCCAAACCATCTCTCCAAAGCATTAATATCCAATCATGCGCTGTATGTTTTAATCAGCAG 1263
		7-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	
***************************************	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	ַ אַ אָ	מ מ מ מ מ מ מ מ מ מ מ מ מ מ מ מ מ מ מ מ
22-SEP-2000 02-OCT-2000 02-OCT-2000 02-OCT-2000 02-OCT-2000 02-OCT-2000 02-OCT-2000 02-OCT-2000 02-OCT-2000 02-OCT-2000 02-OCT-2000 02-OCT-2000 02-OCT-2000 02-OCT-2000 02-OCT-2000 02-OCT-2000 02-OCT-2000 03-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000		0 - AUG-200 0 - AUG-200 1 - SEP-200 1 - SEP-200 1 - SEP-200 1 - SEP-200 2 - S	000000000
2000US-023602P. 2000US-023703P. 2000US-023703P. 2000US-023703P. 2000US-0237040P. 2000US-0239935P. 2000US-0241221P. 2000US-0241785P. 2000US-0241786P. 2000US-0241808P. 2000US-0241808P. 2000US-0241808P. 2000US-0241808P. 2000US-0241808P. 2000US-024678P. 2000US-024677P. 2000US-024677P. 2000US-024677P. 2000US-024678P. 2000US-0246523P. 2000US-0246525P. 2000US-0246525P.	000US-023299 000US-023299 000US-023299 000US-0232401 000US-0233401 000US-0233064 000US-0233064 000US-0233064 000US-0233064 000US-0234274 000US-0234274 000US-0234274 000US-0234274 000US-023428997 000US-02342834997 000US-02342834997	000US-0229287 000US-0229287 000US-0229343 000US-0229343 000US-0229348 000US-0229349 000US-0229509 000US-0229509 000US-0230437 000US-0230437 000US-0231243 000US-0231243 000US-0231243 000US-0231243 000US-0231243 000US-0231243	000US-0225270 000US-0225447 000US-0225758 000US-0225758 000US-0225759 000US-0226279 000US-02262868 000US-0226868

```
AAX54951 to AAX64702 encode the human immune/haematopoietic antigen (I) amino acid sequences given in AAM82170 to AAM91921. (I) have cytostatic activity, and can be used in gene therapy and vaccine production. (I) proteins and polynuclotides may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate (I) expression. For example, they may be used to treat disporders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of (I) by expressing inactive proteins or to supplement the patients own production of (I). Additionally, (I) polynucleotides may be used to produce the secreted (I), by inserting the nucleic acids into a host cell and culturing the cell to express the protein. (I) proteins and polynucleotides may be used to prevent, diagnose and treat immune/haematopoietic-derived cells. AAX64703 to AAX67694 represent human immune/haematopoietic artigen genomic sequences from the present invention. AAX54942 to AAX54950 and AAM82169 represent sequences used in the exemplification of the present invention.
  Query Match
Best Local Similarity
Matches 1491; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17-NOV-2000; 2000US-0249211P; 17-NOV-2000; 2000US-0249213P; 17-NOV-2000; 2000US-0249213P; 17-NOV-2000; 2000US-0249214P; 17-NOV-2000; 2000US-0249214P; 17-NOV-2000; 2000US-0249214P; 17-NOV-2000; 2000US-0249214P; 17-NOV-2000; 2000US-0249244P; 17-NOV-2000; 2000US-0249264P; 17-NOV-2000; 2000US-0249264P; 17-NOV-2000; 2000US-0249265P; 17-NOV-2000; 2000US-0249299P; 17-NOV-2000; 2000US-024929P; 17-NOV-2000; 2000US-024929P; 17-NOV-2000; 2000US-024929P; 17-NOV-2000; 2000US-024929P; 17-NOV-2000; 2000US-0259300P; 17-NOV-2000; 2000US-0259300P; 17-NOV-2000; 2000US-0259300P; 17-NOV-2000; 2000US-0251030P; 17-NOV-2000; 2000US-02511030P; 17-NOV-2000US-02511030P; 17-NOV-2000US-02511030P; 17-NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08-NOV-2000;
08-NOV-2000;
08-NOV-2000;
                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17-NOV-2000;
17-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure; SEQ ID NO 35900; 3071pp + Sequence Listing; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (HUMA-) HUMAN GENOME SCI INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2001-483426/52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ÇĄ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  acids encoding human immune/hematopoietic antigen for preventing, diagnosing and/or treating cancers
                                                                                                    1665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Barash SC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ); 2000US-0249207P.

); 2000US-0249208P.

); 2000US-0249209P.

); 2000US-0249210P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000US-0246528P.
2000US-0246632P.
2000US-0246609P.
2000US-0246610P.
2000US-0246611P.
2000US-0246613P.
                                                                                                 BP;
                                                                                                      497
                    52.8%;
                                                                                                 A; 343 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ruben
Score 1489.2; DB 4;
Pred. No. 1.7e-249;
0; Mismatches 3;
                                                                                                 365 G;
                                                                                                 460
                                                                                                 T; 0 U; 0 Other;
                                              Length 1665;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  polypeptides, and metastasis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뮍
                         당
                                                                S
                                                                                                                      밁
                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                         皮
                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                          1072
                                                                                                                                                                                                                                                                          1517
                                                                                                                                                                                                                                                                                                                           1012
                                                                                                                                                                                                                                                                                                                                                                         1457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1037
                                                                                                                                                                                                                                                                                                                                                                                                                          952
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            892
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  737
                                                     GTATATTAACTATATAAGAGAGTTGTGACAAAACAGAATGATAAAGCTGCGAACCGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                            TAATAATGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAAACGCAAACTCTTTTAAGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAAAAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAAAATAGAGAAGGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AACAGTCCTTCAAGTCTTCTCTGTTTTTTTTCTTCAACTCTCACTTTCTTAGAGTTTACA
                                                                                                                                                  AAGTTGCTTGAATGTTGGGGAGAGGAAAATCTATTGGCTCTCGTGGGTCTCTTCATCTCA
                                                                                                                                                                                                                                                                                                                                                          GTCCCTAATTTAGAAACACCCACAAACTTCACATATCATAATTAGCAAAACAATTGGAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                          TAATAATGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAACGCAAACTCTTTTAAGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTTCAAGCTACTTTAATAAAGGATCTTAAAATGGGCAGGAGGACTGTGAACAAGACACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCCAAAGCATTAATATCCAATCATGCGCTGTATGTTTTAATCAGCAGAAGCATGTTTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCCAAAGCATTAATATCCAATCATGCGCTGTATGTTTTAATCAGCAGAAGCATGTTTTTA 1276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCATGATCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTGACCCCAAACCATCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCATGATCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTGACCCCAAACCATCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GATTTTTCTATTCTTTTCCCTTGACGTTTACTTTCAAGTAACACAAACTCTTCCATCAGG 1156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTTTTATATCAACATCCTTTATTATTTGATTCATTTGAGTTAACAGTGGTGTTAGTGATA 1096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCAACGTTTTTCTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACAGGTCTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGCAACATTGTCCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AACAGTCCTTCAAGTCTTCTGTTTTTTATTCTTCAACTCTCACTTTCTTAGAGTTTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTTTTGCCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTTGGGACTTTTGA
                       GTATATTAACTATATAAGAGAGTTGTGACAAAACAGAATGATAAAGCTGCGAACCGTGGC
                                                                                                                        AAGTTGCTTGAATGTTGGGGAGAGGAAAATCTATTGGCTCTCGTGGGTCTCTTCATCTCA
                                                                                                                                                                                                                                                                                                                           GTCCCTAATTTAGAAACACCCACAAACTTCACATATCATAATTAGCAAAACAATTGGAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTTCAAGCTACTTTAATAAAGGATCTTAAAATGGGCAGGAGGACTGTGAACAAGACACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GATTTTTCTATTCCCTTTGACGTTTACTTTCAAGTAACACAAACTCTTCCATCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTTTTATATCAACATCCTTTATTATTTGATTCATTTGAGTTAACAGTGGTGTTAGTGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTTTTAGGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCATGGTGAGAGGATCAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTTTTAGGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAAGCATGGTGAGAGGATCAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCAACGTTTTTCTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACAGGTCTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGCAACATTGTCCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAAAAAATATTTATATACGACTCTTTAAAAAAGATCTATGTCTTGAAAATAGAGAAGGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTACAGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTGA
                       1251
                                                                       1696
                                                                                                                                                                      1636
                                                                                                                                                                                                                                                                          1576
                                                                                                                                                                                                                                                                                                                                                                       1516
                                                                                                                                                                                                                                                                                                                                                                                                                        1011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1036
                                                                                                                      1191
                                                                                                                                                                                                                          1131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              651
                                                                                                                                                                                                                                                                                                                           1071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   736
```

0

Indels

0; Gaps

```
ARCSULT 10
AACS53007
ID AACS5
AC AACS5

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                  29-MAR-1999;
24-JUN-1999;
27-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Activation-induced cytidine deaminase; AID; cytidine deaminase; immune related disease; allergy; allergic disease; antiallergic; antianaemic; antiasthmatic; ophthalmological; anti-HIV; dermatological; antianaemic; activated immune system disorder; food allergy; immunodeficiency disease; immunoglobulin A deficiency disease; asthma; 19A nephritis; gamma-globulinaemia; atopic dermatitis; allergic colitis; drug allergy; allergic rohinitis; Rosen disease; DiGeorge disease; AIDS; ataxia telangiectasia; common variable immunodeficiency disorder; ataxia telangiectasia; common variable immunodeficiency disorder; anajor histocompatibility class II deficiency disease;
  WPI; 2000-611715/58
                                                     Honjo T,
                                                                                                               (NISB )
                                                                                                                                                                                                                                                                                                                  28-MAR-2000; 2000WO-JP001918
                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200058480-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    05-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAC55307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 immunodeficiency syndrome; IgG subclass selection disorder; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      activation-induced cytidine deaminase encoding cDNA SEQ
                                                                                                               JAPAN
HONJO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAGAAAGAGAGAGGGCCGGGCGTGGTGGCTCACGCCTGTAATCCCAGCACTTTTGGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCCCGTCTGTACTCAAAATGCAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAGAAAGAGAGAGGCCGGGCGTGGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACACGCTCATAGTTCTAGCTGCTTGGGAGGTTGAGGAGGAGGATGGCTTGAACACAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACACGCTCATAGTTCTAGCTGCTTGGGAGGTTGAGGAGGAGGATGGCTTGAACACACGGT 1756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAGACTCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAGACTCTGTC 2110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGAGGTGGAGGTTGCAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGAGGTGGAGGTTGCAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCCCGTCTGTACTCAAAAATGCAAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAAA
                                                       Muramatsu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first
                                                                                                               TOBACCO INC.
                                                                                                                                                                                               99JP-00087192.
99JP-00178999.
99JP-00371382.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               93. .689
/*tag= ?
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /product=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "activation-induced cytidine deaminase"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NO:1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1551
```

```
Nucleic acid encoding activation induced cytidine deaminase, useful as target for drug development for immune-related diseases including
                                                                                                                Claim 3; Page 126-130; 174pp; Japanese
```

ρυ

The present sequence encodes mouse activation-induced cytidine deaminase (AID). AID structurally relates to an RNA editing enzyme APOBEC-1 and has cytidine activity similar to APOBEC-1. AID has antiallergic, antianaemic, ophthalmological, anti-HIV and dermatological activities, and can be used in gene therapy. AID polynucleotides are useful in methods for identifying drugs for the treatment of B cell associated immune system disorders, immunodeficiency diseases and allergies, such as immunoglobulin A (IgA) deficiency disease, IgA nephritis, gamma-cytial activities, allergic colitis, asthma, food allergy, allergic rhimitis, Rosen disease, DiGeorge disease, ataxia telangicctasia, common variable immunodeficiency disease, AIDS (auto immunodeficiency syndrome), elevated IgB disorder, and IgG subclass celection disorder. The DNA sequences encoding AID may be used for gene therapy and the antibodies to the AID protein may be used for disgnosis of the antibodies to the AID protein may be used for disgnosis

Sequence 2440 BP; 706 A; 546 C; 551 G;

636 T; 0 U; 1 Other;

S 밁 Ś 망 Ş 밁 S 밁 Ś 밁 5 밁 S B S 밁 Ś 밁 Š 뮍 Ś Matches 1006; Query Match Best Local Similarity 316 603 556 496 483 436 423 376 363 303 256 243 196 183 136 123 76 63 16 4. AGCTTCGGCGCATCCTTTTGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTA GTGAAAGAACTTTCAAAGCCTGGGAAGGGCTACATGAAAATTCTGTCCGGCTAACCAGAC TCACGCTGGAGACCGATATGGACAGCCTTCTGATGAAGCAAAAGAAGTTTCTTTACCATT ACACTCTGGACACCACTATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAAT GAACCATCATTAATTGAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGGAGGCAAG-AAG ATGAAAGAACTTTCAAAGCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTCTCCAGAC AGATCGGGATCATGACCTTCAAAGACTATTTTTACTGCTGGAATACATTTGTAGAAAATC AAATAGCCATCATGACCTTCAAAGATTATTTTTACTGCTGGAATACTTTTGTAGAAAAACC rerereaacececaacecreacecreacececacacacececrececerece тствтваввассвелаввествавессваввевествсввевествельственестве CTGAGTTTCTGAGATGGAACCCTAACCTCAGCCTGAGGATTTTCACCGCGCGCCCTCTACT сселсттстеселееелассссаласстслетствлеелтстслееесесесстстлст GTTACCGCGTCACCTGGTTCACCTCCTGGAGCCCGTGCTATGACTGTGCCCGGCACGTGG GCTACCGCGTCACCTGGTTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGTGG GCCACGTGGAATTGTTGCTTACGCTACATCTCAGACTGGGACCTGGACCCGGGCCGGT eccacereeaarrecrerrecrececracarereeaacreeeaccraeaccreeecec GGAGAGATAGTGCCACCTCCTGCTCACTGGACTTCGGCCACCTTCGCAACAAGTCTGGCT GGCGTGACAGTGCTACATCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGGCT GAAGCAGCCTTGCTTGAAGCAAGCTTCCTTTGGCCTAAGACTTTGAGGGAGTCAAGAAAG Conservative 21.4%; 0; Score 603.4; Pred. No. 1.4 Mismatches 351; 1.4e-95; 멂 ω •• Indels Length 2440, 92; Gaps 182 375 302 242 195 662 615 435 422 362 315 135 122 62 602 555 542 495 482 255 75 10

```
RESULT 11
ADB88952
     AXAXAXBXAXAXA
                                                                                                                                                                            S
                                                                                                                                                                                               밁
                                                                                                                                                                                                                8
                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                         Ď,
                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                     맑
                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                             닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
  ds; cytostatic; virucide; antidote; mutation;
activation-induced cytidine deaminase; cell phenotype;
monoclonal antibody; antigen; cross-reactivity; tumour;
germ warfare agent; toxin; V region.
                                                   AID
                                                                     04-DEC-2003
                                                                                                           ADB88952
                                                  gene
                                                                                                                                                                             1442
                                                                                                                                                                                               1306
                                                                                                                                                                                                                                                                          1192
                                                                                                                                                                                                                                                                                                                 1138
                                                                                                                                                                                                                                                                                                                                                       1085
                                                                                                                                                           1366
                                                                                                                                                                                                                                     1246
                                                                                                                                                                                                                                                                                                                                    1202
                                                                                                                                                                                                                                                                                                                                                                         1142
                                                                                                                                                                                                                                                                                                                                                                                            1032
                                                                                                                                                                                                                                                                                                                                                                                                              1082
                                                                                                                                                                                                                                                                                                                                                                                                                                                    1022
                                                                                                                                                                                                                                                                                                                                                                                                                                  972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                723
                                                   a8
                                                                                                          standard;
                                                                                                                                                                        AACTCTTTT
                                                                                                                                                           GACTCTTTT
                                                                                                                                                                                               ACGAAGAAATCACTCTGAAAATGAGTTCACGCCTCAAGAAGCAAATCCC
                                                                                                                                                                                                               GTGAACAAGACACCCTAATAATGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAACGCA
                                                                                                                                                                                                                                    AGAATGCACGATCGCCTCTGGGTGATTTCAATAAGGATCTTAAAATGCAGATGAGGACT
                                                                                                                                                                                                                                                     ACCATGCATGGTCACCTTCAAGCTACTTTAATAAAGGATCTTAAAATGGGCAGGAGGACT
                                                                                                                                                                                                                                                                                                                             ACCCCAAACCATCTCTCCAAAGCATTAATATCCAATCATGCGCTGTATGTTTTAATCAGC
                                                                                                                                                                                                                                                                                                                                                                     AACTCTTCCATCAGGCCATGATCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTG
                                                                                                                                                                                                                                                                                                                                                                                                           GIGGIGITAGIGATAGATTITICTATTCTTTTCCCTTGACGITTACTTTCAAGTAACACA 1141
                                                                                                                                                                                                                                                                                                                                                                                                                              GGAGACGACCÁCACAGTTTGTTÁCACCCACCCTGTGTTCCTTGATTCATTTGAATTCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                             TGAGAGGATCAAATGTTTTATATCAACATCCTTTATTATTTGATTCATTTGAGTTAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AACGITTTTCTATGACTTTTAGGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AACATTGTCCCCTACT-GGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GACAGIGGATAAAAACAGICCTTCAAGICTTCTCTGITTTTATICTTCAACICTCICACTI
                                                                                                                                                                                                                                                                                           GGGGTATCAGTGACGGATTCTTCTATTCTTTCCCTTAAGGCTCACTTTCAGG------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AATAGAGAAGGAACACAGGTCTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCTTAGAGTTTACAGAAAAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGACTGGATAGAAAAACAACCCTTCA--ACTACATGTTTTTCTTCTTAAGTACTCACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTTTGGGACTTTGATAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAA
                                                                                                                                                                                                                                                                                                              - CACAAGCCATTCTCTCAAAAACATTAATACTCAGGCACATGCTGTATGTTTTCA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AACATCGCCATCTACTGGGGAACAGCATAACTTCCAGACTTTGGGTCGTGAATGATGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGGACCGCCAGAGCAATGATGTAAC----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTATAAGTGTAGGGGGAAA-----TTATATGACTTTTTAAAAAATACTTGAGCTGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGTTGGGATTTTGAAAGCAACCTCCTGGAATGTCACACGTGATGAAATTTCT---CTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AACTTCGGCGCATCCTTTTGCCCTTGTACGAAGTCGATGACTTGCGAGATGCATTTCGTA
                                                 substrate used in
                                                                                                                                                                                                                                                                      ---CTGTCCGTCGTGTTTTTCACATTTGTATGTGAAAGGGCTTGGGGTGGGATTTGA
                                                                    (first
                                                                                                          DNA;
                                                                                                                                                          1374
                                                                                                                                                                            1450
                                                                    entry)
                                                                                                          597
                                                                                                          股
                                                 AID mutagenic method
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ----TGAGCTTGCTGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ----GGAAAAGCATAT
                                                                                                                                                                                                                1441
                                                                                                                                                                                              1365
                                                                                                                                                                                                                                                    1381
                                                                                                                                                                                                                                   1305
                                                                                                                                                                                                                                                                        1245
                                                                                                                                                                                                                                                                                                                                1261
                                                                                                                                                                                                                                                                                                                                                                                                                               1031
                                                                                                                                                                                                                                                                                                                                                                                                                                                  1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1021
                                                                                                                                                                                                                                                                                                             1191
                                                                                                                                                                                                                                                                                                                                                                                         1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       675
  4444444444444444444444444444444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mutation
                                               mutation
                                                                            mutation
                                                                                                        mutation
                                                                                                                                     mutation
                                                                                                                                                                 mutation
                                                                                                                                                                                           mutation
                                                                                                                                                                                                                                                    mutation
                                                                                                                                                                                                                                                                                 mutation
                                                                                                                                                                                                                                                                                                             mutation
                                                                                                                                                                                                                                                                                                                                          mutation
                                                                                                                                                                                                                                                                                                                                                                      mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Key
mutation
                                                                                                                                                                                                                         mutation
                                                                                                                                                                                                                                                                                                                                                                                                  mutation
                                                                                                                                                                                                                                                                                                                                                                                                                              mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                           mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                              replace(329,T)
/*tag= v
      /note= "mutation
replace(350,G,T)
/*tag= w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         eplace.
/*tag= c
/note= "mutatic
replace(61,T)
'. ag= d
'. ag=
                                                                                                                                                                                                                      /*tag= o
/note= "mutation
replace(209,C)
                                                                                                      /note= "mutation replace(289,A)
                                                                                                                                                                                           /note= "mutation
replace(218,T)
                                                                                                                                                                                                                                                  /note= "mutation replace(206,G)
                                                                           note= "mutation
replace(303,T)
                                                                                                                                   note= "mutation
eplace(261,G)
                                                                                                                                                               /note= "mutation
replace(250,C)
                                                                                                                                                                                                                                                                              /*tag= m
/note= "G mutation
replace(178,T)
                                                                                                                                                                                                                                                                                                           /note= "mutation
replace(165, T, G)
                                                                                                                                                                                                                                                                                                                                        replace (161,A)
                                                                                                                                                                                                                                                                                                                                                                    /note= "mutation replace(156,T)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note= "mutation
replace(79,G)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  replace(73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note= "mutation replace(66,A)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             replace (9
                                                                                                                                                                                                                                                                                                                                                                                                                            note= "mutation
replace(112,C)
                                                                                                                                                                                                                                                                                                                                                                                                                                                 replace(85,G)
/*tag= h
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /*tag= g
/note= "mutation
                                                                                                                                                                                                                                                                                                                                                                                                 eplace(118,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            note= "mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                   note= "mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 note= "mutation
                                                                                                                                                                                                                                                                                                                                                                                                e (118,G)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mutation
e(73,T)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Φ
mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ģ
                           'n
                                                       ä
                                                                                    ;
                                                                                                                ä
                                                                                                                                            ä
                                                                                                                                                                        ä
                                                                                                                                                                                                     Ħ
                                                                                                                                                                                                                                  ij
                                                                                                                                                                                                                                                            ä
                                                                                                                                                                                                                                                                                                                     in
                                                                                                                                                                                                                                                                                                                                                  'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ij
                                                                                                                                                                                                                                                                                                                                                                              'n
                                                                                                                                                                                                                                                                                                                                                                                                          ij
                                                                                                                                                                                                                                                                                                                                                                                                                                       Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                in
ä
                                                                                                                                                                                                                                                                                         'n
                                                                                                                                                                                                     Ramos cell'
                                                                                                                                                                                                                                                                                                                      5-1d
                                                                                                                                                                                                                                                                                                                                                   P1-5
                                                                                                                                                                                                                                                                                                                                                                              P1-5
                            Ramos
                                                         Ramos
                                                                                     Ramos
                                                                                                                Ramos
                                                                                                                                              Ramos
                                                                                                                                                                         Ramos
                                                                                                                                                                                                                                                                                                                                                                                                                                       P1-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P1-5
                                                                                                                                                                                                                                                            Ramos
                                                                                                                                                                                                                                  CHO cell"
                                                                                                                                                                                                                                                                                                                                                                                                          Ramos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ramos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GHO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    O
CH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ramos cell<sup>n</sup>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P1-5 hybridoma cell'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P1-5 hybridoma
Ramos
                                                                                                                                                                                                                                                                                         Ramos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cell"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ce11 "
                                                                                                                                                                                                                                                                                                                                                hybridoma
                                                                                                                                                                                                                                                                                                                                                                              hybridoma
                                                                                                                                                                                                                                                                                                                     hybridoma
                                                                                                                                                                                                                                                                                                                                                                                                                                      hybridoma
                            cell"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      hybridoma
                                                                                                               cell"
                                                         cell"
                                                                                                                                                                         ce11'
                                                                                                                                                                                                                                                             cell'
                                                                                                                                                                                                                                                                                                                                                                                                           cell"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cell'
cell,
ດ
                                                                                                                                                                                                                                                                                         н
                                                                                                                                                                                                                                                                                                                                                   cell"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cell"
mutation
                                                                                                                                                                                                                                                                                         mutation
ä
                                                                                                                                                                                                                                                                                         in
g
                                                                                                                                                                                                                                                                                         OHO
CHO
```

```
Martin
                   17-JAN-2002;
                             15-JAN-2003; 2003WO-US001149
                                                  WO2003061363-A2
                                                                      mutation
                                                                                     mutation
                                                                                                    mutation
                                                                                                                   mutation
                                                                                                                                  mutation
                                                                                                                                                       mutation
                                                                                                                                                                      mutation
                                                                                                                                                                                     mutation
                                                                                                                                                                                                     mutation
                                                                                                                                                                                                                    mutation
                                                                                                                                                                                                                                   mutation
                                                                                                                                                                                                                                                  mutation
                                                                                                                                                                                                                                                                 mutation
                                                                                                                                                                                                                                                                                mutation
                                                                                                                                                                                                                                                                                               mutation
                                                                                                                                                                                                                                                                                                              mutation
                                                                                                                                                                                                                                                                                                                              mutation
                                                                                                                                                                                                                                                                                                                                            mutation
                                                                                                                                                                                                                                                                                                                                                            mutation
                                                                                                                                                                                                                                                                                                                                                                           mutation
         (YESH ) UNIV YESHIVA EINSTEIN
                   2002US-0350269P
                                                               /note= "mutation
replace(570,T)
/*tag= aq
                                                                               replace(568,T)
/*tag= ap
                                                                                                                                       Ramos
                                                                                                                                                                     /note= "mutation replace(517,C)
                                                                                                              replace(538,A)
/*tag= an
                                                                                                                            replace(533,A)
/*tag= am
                                                                                                                                                                                replace(495,A)
/*tag= aj
                                                                                                                                                                                                   /note= "mutation replace(449,T)
                                                                                                                                                                                                                             replace(430,G)
/*tag= ag
                                                                                                                                                                                                                                                 /note= "mutation replace(421, A)
                                                                                                                                                                                                                                                                /note= "mutation replace(420,T)
                                                                                                   ceplace (549, A)
                                                                                                                                                      eplace (526, T,
                                                                                                                                                            note=
                                                                                                                                                                                          note=
                                                                                                                                                                                                                  replace (440, A)
                                                                                                                                                                                                                        note= "mutation
                                                                                                                                                                                                                                       note=
                                                                                                                                                                                                                                                                               /note= "mutation
replace(418,T)
                                                                                                                                                                                                                                                                                              /note= "mutation replace(410,T)
                                                                                                                                                                                                                                                                                                              replace (402, A)
                                                                                                                                                                                                                                                                                                                             replace (375,
                                                                                                                                                                                                                                                                                                                                   'note=
                                                                                                                                                                                                                                                                                                                                            replace (367, T,
                                                                                                                                                                                                                                                                                                                                                           /note= "A mutation replace(357,G)
                                                                                                                                                                                                                                                                                                                                                                          replace (356, A)
                                                                                                                                       = "T mutation cell"
                                                                                                                                                                                                                                                                                                                                           = "mutation i
se(367,T, A)
                                                                                                                                                      "mutation :
se(526,T, A)
                                                                                                                                                                                                                                                                                                                             e (375,A)
                                                                                         "mutation
                                                                                                        "mutation
                                                                                                                       "mutation
                                                                                                                                                                                         "mutation
                                                                                                                                                                                                                                      "mutation
                                                                                                                                                                                                                                                                                                                   "mutation
                                                           "mutation
         COLLEGE
                                                           in
                                                                          ä
                                                                                          ij
                                                                                                        ij
                                                                                                                       ij
                                                                                                                                                           Ħ
                                                                                                                                                                          'n
                                                                                                                                                                                         'n
                                                                                                                                                                                                         in
                                                                                                                                                                                                                       ij
                                                                                                                                                                                                                                       in
                                                                                                                                                                                                                                                      in
                                                                                                                                                                                                                                                                     ij
                                                                                                                                                                                                                                                                                     ij
                                                                                                                                                                                                                                                                                                    in
                                                                                                                                                                                                                                                                                                                   ij
                                                                                                                                                                                                                                                                                                                                  in
                                                                                                                                                                                                                                                                                                                                                 in
                                                                                                                                            ä
                                                                                                                                                                                                                                                                                                                                                                Ħ
                                                           CHO cell'
                                                                                          OHO
                                                                                                        CHO
                                                                                                                        P1-5
                                                                                                                                                                           CHO
                                                                                                                                                                                                                                                      P1-5
                                                                                                                                                                                                                                                                     P1-5
                                                                                                                                                                                                                                                                                     P1-5
                                                                                                                                                                                                                                                                                                                   OHO
CH
                                                                                                                                                                                                                                                                                                                                  P1-5
                                                                                                                                                           Ramos
                                                                                                                                                                                         P1-5 hybridoma
                                                                                                                                                                                                                        Ramos
                                                                          Ramos cell"
                                                                                                                                                                                                         B
                                                                                                                                                                                                                                       G
                                                                                                                                                                                                                                                                                                    P1-5 hybridoma
                                                                                                                                                                                                                                                                                                                                                 Ramos
                                                                                                                                           P1-5 hybridoma cell,
                                                                                                                                                                                                                                                                                                                                                                 Ramos
                                                                                         cell"
                                                                                                        cell"
                                                                                                                                                                                                         cell"
                                                                                                                                                                                                                                       cell"
                                                                                                                                                                                                                                                                                                                   cell"
                                                                                                                                                                                                                                                      hybridoma
                                                                                                                                                                                                                                                                                                                                  hybridoma
                                                                                                                       hybridoma
                                                                                                                                                                                                                                                                     hybridoma
                                                                                                                                                                                                                                                                                     hybridoma
                                                                                                                                                           cell"
                                                                                                                                                                                                                       cell"
                                                                                                                                                                                                                                                                                                                                                 cell"
                                                                                                                                                                                                                                                                                                                                                                cell,
                                                                                                                                                                                                                                                                                                                                                                Þ
                                                                                                                                                                                                                                                                    cell"
                                                                                                                                                                                                                                                                                                   cell"
                                                                                                                                                                                                                                                                                                                                  cell"
                                                                                                                                                                                          cell"
                                                                                                                                                                                                                                                                                     cell"
                                                                                                                                                                                                                                                                                                                                                                mutation
                                                                                                                                            A mutation
                                                                                                                                                                                                                                                                                                                                                                Ħ
                                                                                                                                                                                                                                                                                                                                                                CHO
                                                                                                                                                                                                                                                                                                                                                                cell"
                                                                                                                                            in
                8
                          밁
                                   S
                                               밁
                                                       Ş
                                                                    문
                                                                             Ş
                                                                                                5
                                                                                                            片
                                                                                                                     Ś
                                                                                                                                맑
                                                                                                                                         Ś
                                                                                                                                                     밁
                                                                                                                                                              Ś
                                                                                                                                                                         밁
                                                                                                                                                                                  8
                                                                                                                                                                                              맑
                                                                                                                                                                                                                                      XGXFFFFXXX00000000000000XX
                                                                                        밁
                                                                                                                                                                                                      S
                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                           deaminase
                                                                                                                                                                                                                                                                                                                                 Example 4; Fig 6;
        541
                  620
                            481
                                      560
                                                421
                                                         500
                                                                    361
                                                                              440
                                                                                         301
                                                                                                   380
                                                                                                             241
                                                                                                                       320
                                                                                                                                 181
                                                                                                                                           260
                                                                                                                                                               200
                                                                                                                                                     121
                                                                                                                                                                                    140
                                                                                                                                                                          61
                                                                                                                                                                                                        90
                                                                                                                                                                                              μ
                                                                                                                                                                                                                                      597
                            GCCT
```

```
R WPI; 2003-747983/70.

X X Induction of mutations in gene expressed in eukaryotic cell useful e.g. T Induction of mutations in gene expressed in eukaryotic cell useful e.g. T to produce antibodies with greater affinity or specificity for antigens T e.g. human pathogens by expressing an activation-induced cytidine T deaminase gene in cell.
```

Example 4; Fig 6; 73pp; English.

The invention relates to the induction of mutations in a gene expressed in a eukaryotic cell, where the gene is operably linked to a promoter and within 2 kb of promoter, by expressing a transgenic activation-induced cytidine deaminase (AID) gene in the cell. The method is useful for producing mutated genes and proteins, determining the effect of a mutation on a protein or cell phenotype, and producing genes and proteins with altered properties. It is especially useful for producing antibodies with altered affinities or specificities for an antigen, or increased/decreased cross-reactivity for a second antigen, or produce antibodies with greater affinity/specificity useful these for a set tumours, viruses such as Ebola and Lhasa Fever or against germ warfare agents, toxins (e.g. ricin). The method may similarly be used to alter affinity, specificity or cross-reactivity of a monoclonal antibody. This sequence represents the AID gene used in the method of the invention to induce mutations in the sequence.

equence 597 BP; 128 A; 164 C; 155 G; 150 T; 0 U; 0 Other;

```
Query Match
Best Local Similarity
Matches 597; Conserv
                                                                                                                                                                                                                                                                                                                  GCTGAGCCCGAGGGGCTGCGGCGCCCCGCGCCCAAATAGCCATCATGACC
                                                                                                                                                                                                                                                                                                                                                                                                         AACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCTCTACTTCTGTGAGGACCGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGTGGCCCGACTTTCTGCGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGGCTGCCACGTGGAATTGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTAAGGGTCGGCGTGAGACCTACCTGTGCTACGTAGTGAAGAGGCGTGACAGTGCTACA
                                                                                                                                        GCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTCTCCAGACAGCTTCGGCGCATCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTCCTCCGCTACATCTCGGACTGGGACCTAGACCCTGGCCGCTGCTACCCGCGTCACCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTAAGGGTCGGCGTGAGACCTACCTGTGCTACGTAGTGAAGAGGCGTGACAGTGCTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAATTCAAAAATGTCCGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAATTCAAAAATTGTCCGCTGG
TTGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTGA
                                           TTGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTGA 676
                                                                                                                                                                                        TTCAAAGATTATTTTTACTGCTGGAATACTTTTGTAGAAAACCATGAAAGAACTTTCAAA
                                                                                                                                                                                                                                    TTCAAAGATTATTTTTACTGCTGGAATACTTTTGTAGAAAACCATGAAAGAACTTTCAAA
                                                                                                                                                                                                                                                                                  GCTGAGCCCGAGGGGCTGCGGCGGCTGCACCGCGGGGTGCAAATAGCCATCATGACC
                                                                                                                                                                                                                                                                                                                                                                                 AACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCTCTACTTCTGTGAGGACCGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGTGGCCGACTTTCTGCGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTCCTCCGCTACATCTCGGACTGGGACCTAGACCCTGGCCGCTGCTACCGCGTCACCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGGCTGCCACGTGGAATTGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21.2%;
ilarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 597; DB 8;
Pred. No. 1.5e-94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 597;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
  597
                                                                                              540
                                                                                                                                            619
                                                                                                                                                                                        480
                                                                                                                                                                                                                                    559
                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                499
                                                                                                                                                                                                                                                                                                                                                                                                                            439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           199
                                                                                                                                                                                                                                                                                                                                                                              360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

		08-SEP-2000; 2000US-0231413F. 08-SEP-2000; 2000US-0231414P. 08-SEP-2000; 2000US-0232080P. 08-SEP-2000; 2000US-0232081P. 12-SEP-2000; 2000US-0231968P.	000; 20000	000; 2000U	000; 2000U	000; 2000	000; 20000	000; 2000U	000; 2000U	000; 20000	2000	000; 2000U	000; 2000U	000; 2000	000; 20000	000; 2000U	000; 2000U	000; 20000	000; 20000	000; 2000U	000; 2000U	000; 20000	000; 2000	000; 20000	000, 20000	000; 2000U	000; 20001	000, 20000	000; 2000U	2000	2000;	20000	000; 20000	2000	2000; 20000	4-FEB-2000; 2000U	-2000; 2000U	200	17~JAN-2001; 2001WO-US001354.	U9-AUG-2001.	i	WO200157182-A2.	Homo sapiens.		Human; immune; naematopoietic; immune/haematopoietic antigen; cancer; cytostatic; gene therapy; vaccine; metastasis; ds.		Human immune/haematopoietic antigen genomic sequence SEQ ID NO:35901.	07-NOV-2001 (first entry)		AAK81089.	AAK81089 standard; DNA; 574 BP.	AAK81089
**************************************			000	Š	88	000	00	00	õ		õ	8	8	8-NOV-200	8-NOV-200	8-NOV-200	8-NOV-200	8-NOV-200	8-NOV-200	8-NOV-200	8-NOV-200	8-NOV-200	8-NOV-200	8-NOV-200	8-NOV-200	8-NOV-200	0-0CT-200	0-0CT-200	0-0CT-200	0-0CT-200	0-0CT-200	00	õ	Š	00	200		2-OCT-200	9-SEP-200	9-SEP-200	9-SEP-200	9-SEP-200	7-SEP-200	6-SEP-200	5-SEP-200	1-SEP-200	1-SEP-200	4-SEP-200	4-859-200	4-SEP-200	000	2
	## 4 # SEP - 200 ## 5 SEP - 200 ## 6 SEP - 200 ## 6 SEP - 200 ## 7 SEP - 200 ## 7 SEP - 200 ## 8	2000US-0249 2000US-0249 2000US-0249 2000US-0250																																																		

```
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                 밁
                                                             Ś
                                                                                                   맑
                                                                                                                                 8
                                                                                                                                                                      밁
                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                        맑
                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAKS4951 to AAK64702 encode the human immune/haematopoietic antigen (I) camino acid sequences given in AAM82170 to AAM91921. (I) have cytostatic cactivity, and can be used in gene therapy and vaccine production. (I) proteins and polynucleotides may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate (I) expression. For caxemple, they may be used to treat discretize associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of (I) by expressing inactive proteins or to complement the patients own production of (I). Additionally, (I) concerns and some host cell and culturing the cell to express the cultic acids into a host cell and culturing the cell to express the concerns and treat immune/haematopoietic-related diseases, especially cancers and cancer metastases of haematopoietic-derived cells. AAK64703 concerns from the present inmune/haematopoietic antigen genomic concerns sequences used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 574;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                05-DBC-2000;
05-DBC-2000;
05-DBC-2000;
06-DBC-2000;
08-DBC-2000;
08-DBC-2000;
08-DBC-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11-DEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 574 BP; 201 A; 80 C; 85 G; 208 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure; SEQ ID NO 35901; 3071pp + Sequence Listing; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           useful for preventing,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2001-483426/52
                                                                                                                                     2451
                                                                                                                                                                                                                                                                                                                                         2271
                                                                  2511
                                                                                                                                                                                                      2391
                                                                                                                                                                                                                                                                        2331
                                                                                                                                                                                                                                                                                                                                                                                              2211 AATGTAAGGAGCCAATAAGGGATCCCTATTTGTCTCTTTTGGTGTCTATTTTGTCCCTAAC
                                   301
                                                                                                                                                                      181
                                                                                                   241
                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                            ب
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        acids encoding human immune/hematopoietic antigen polypeptides, for preventing, diagnosing and/or treating cancers and metastasis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HUMAN GENOME
AACAACGTATGTAATTGTAACATTGCAGTAATGGTGCTACGAAGCCATTTCTCTTGATTT
                                                                                                                         CATTTATATTTTATATTATTTTGCGTCTAATGATTTTTTATTATAACATGATTTTCCTTTTCT
                                                                                                                                                                                         TATTTAATCTTATTGTACATAAGTTTGTAAAAGAGTTAAAAATTGTTACTTCATGTATT
                                                                                                                                                                                                                                                              TAGCAACCCTTGCAATGAAGATGAGCAGATCCACAGGAAAACTTGAATGCACAACTGTCT
                                                                                                                                                                                                                                                                                                                               AACTGTCTTTGACAGTGAGAAAAATATTCAGAATAACCATATCCCCTGTGCCGTTATTACC
                               GATATATTGAAATGGAGTCTCAAAAGCTTCATAAATTTATAACTTTAGAAATGATTCTAAT
                                                               GATATATTGAAATGGAGTCTCAAAGCTTCATAAATTTATAACTTTAGAAATGATTCTAAT
                                                                                                                                                                                                                                                                                                        AACTGTCTTTGACAGTGAGAAAAATATTCAGAATAACCATATCCCTGTGCCGTTATTACC
                                                                                                                                                                                                                                                                                                                                                                         AATGTAAGGAGCCAATAAGGGATCCCTATTTGTCTCTTTTGGTGTCTATTTGTCCCTAAC
                                                                                                  CATTTATATTATTATTÄTTTTGCGTCTÄÄTGÄTTTTTTTATTAACÄTGATTTCCTTTTCT
                                                                                                                                                                   TATTTTAATCTTATTGTACATAAGTTTGTAAAAGAGTTAAAATTGTTACTTCATGTATT
                                                                                                                                                                                                                                     TAGCAACCCTTGCAATGAAGATGAGCAGATCCACAGGAAAACTTGAATGCACAACTGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Barash SC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; 2000US-0251030P.
2000US-02567198BP.
2000US-0256719P.
; 2000US-0251856P.
; 2000US-025186BP.
; 2000US-0251869P.
; 2000US-0251989P.
; 2000US-0251990P.
; 2000US-0251990P.
                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2001US-0259678P
                                                                                                                                                                                                                                                                                                                                                                                                                                                           20.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ruben SM;
                                                                                                                                                                                                                                                                                                                                                                                                                                            °,
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 574; DB 4; Pred. No. 1.5e-90;
                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 574;
                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                2570
                                                                                                                                                                                                    2450
                                                                                                                                                                                                                                                                       2390
                                                                                                                                                                                                                                                                                                                                         2330
                                                                                                  300
                                                                                                                                                                   240
                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                                                         60
```

```
RESULT 13
AAK61819
 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
          14 AUG-2000
14 -AUG-2000
12 -AUG-2000
13 -AUG-2000
14 -AUG-2000
14 -AUG-2000
14 -AUG-2000
17 -AUG-2000
18 -AUG-2000
19 -AUG-2000
22 -AUG-2000
22 -AUG-2000
23 -AUG-2000
23 -AUG-2000
23 -AUG-2000
                                                                                                                                                                                                                     11-JUL-2000;
11-JUL-2000;
14-JUL-2000;
26-JUL-2000;
26-JUL-2000;
                                                                                                                                                                                                                                                                                                     19-MAY-2000;
07-JUN-2000;
28-JUN-2000;
30-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                   16-MAR-2000;
17-MAR-2000;
18-APR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; immune; haematopoietic; immune/haematopoietic antigen; cancer; cytostatic; gene therapy; vaccine; metastasis; ss.
                                                                                                                                                                                                                                                                                                                                                                                      02-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                               17-JAN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human immune/haematopoietic antigen encoding cDNA SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   06-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAK61819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361 AACAACGTATGTAATTGTAACATTGCAGTAATGGTGCTACGAAGCCATTTCTCTTGATTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GATAAATAATTTTGGAAGCTGTGAAGATAAAATACCAAATAAAATAATATATAAAAGTGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TATATGAAGTTAAAATAAAAATCAGTATGATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATATGAAGTTAAAATAAAAAATCAGTATGATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GATAAATAATTTTGGAAGCTGTGAAGATAAAATACCAAATAAAATAATATAAAAGTGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000US-0186350

2000US-0198074

2000US-0199076

2000US-0205457

2000US-0215135P

2000US-0216840P

2000US-0217487P

2000US-0217487P

2000US-0218890P

2000US-0218996P

2000US-0224519P

2000US-0224519P

2000US-0224519P

2000US-0225213P

2000US-0225219P

2000US-0225759P

2000US-0225881P

2000US-0226881P

2000US-0227182P

2000US-022882P

2000US-022882PP

2000US-022882PP
                                                                                                                                                                                                                                                                                                                                                                                                                                               2001WO-US001354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ID NO:6879.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    480
```

05-SEP-2000; 06-SEP-2000; 06-SEP-2000; 06-SEP-2000; 08-SEP-2000; 08-SEP-2000; 08-SEP-2000;

2000US-0229345P 2000US-0229345P 2000US-0229345P 2000US-0229509P 2000US-023953P 2000US-0230437P 2000US-0231242P 2000US-0231242P 2000US-0231244P 2000US-0231244P 2000US-0231413P 2000US-0232080P 2000US-0232080P

08-SEP-2000; 08-SEP-2000; 08-SEP-2000; 08-SEP-2000;

2000US-0231968P. 2000US-023239PP. 2000US-023239PP. 2000US-0232399P. 2000US-0232399P. 2000US-0232401P. 2000US-0232401P. 2000US-0233064P.

```
á
                                               문
                                                                        Ş
                                                                                                           문
                                                                                                                                     Ś
                                                                                                                                                                                                                                    amino acid sequences given in AAM82170 to AAM91921. (I) have cytostatic CC activity, and can be used in gene therapy and vaccine production. (I) CC proteins and polynucleotides may be used in the prevention, diagnosis and CC treatment of diseases associated with inappropriate (I) expression is an expression. For CC example, they may be used to treat disorders associated with decreased CC expression by rectifying mutations or deletions in a patient's genome CC that affect the activity of (I) by expressing inactive proteins or to supplement the patients own production of (I). Additionally, (I) CC supplement the patients own production of (I). Additionally, (I) the concept into a host cell and culturing the cell to express the CC protein. (I) proteins and polynucleotides may be used to prevent, and diagnose and treat immune/haematopoietic diseases, especially cancers and cancer metastases of haematopoietic dartigen genomic conservations and present invention. AAK87694 represent human immune/haematopoietic antigen genomic conservations and process in the present invention. AAK87694 conservations and process in the present invention.
                                                                                                                                                                      Query Match
Best Local S
Matches 429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17-NOV-2000
17-NOV-2000
17-NOV-2000
17-NOV-2000
17-NOV-2000
17-NOV-2000
17-NOV-2000
17-NOV-2000
01-DEC-2000
05-DEC-2000
05-DEC-2000
05-DEC-2000
05-DEC-2000
05-DEC-2000
05-DEC-2000
06-DEC-2000
08-DEC-2000
08-DEC-2000
08-DEC-2000
08-DEC-2000
08-DEC-2000
08-DEC-2000
08-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
                                                                                                                                                                                                                                  Sequence 429 BP;
                                                                                                                                                                                                                                                               sequences from the present invention. AAK54942 to AAK54950 and AAM82169 represent sequences used in the exemplification of the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nucleic acids encoding human immune/hematopoietic antigen polypeptides, useful for preventing, diagnosing and/or treating cancers and metastasis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2001-483426/52.
P-PSDB; AAM89038.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAK54951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (HUMA-)
                                                                                                                                           1386
1506 CARTIGGAAGGAAGTIGCTIGAATGTIGGGGAGAGAAAATCIATIGGCTCTCGIGGGTC
                                                                             1446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                        429;
                                                 61
                                                                                                           ш
                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HUMAN
                                               CTTTTAAGGAAGTCCCTAATTTAGAAACACCCACAAACTTCACATATCATAATTAGCAAA
                                                                                                                                   ACAAGACACCCTAATAATGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAAACGCAAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                to AAK64702 encode the human immune/haematopoietic antigen id sequences given in AAM82170 to AAM91921. (I) have cytosta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO 6879; 307ipp + Sequence Listing; English.
                                                                    CTTTTAAGGAAGTCCCTAATTTAGAAACACCCACAAACTTCACATATCATAATTAGCAAA
                                                                                                           ACAAGACACCCTAATAATGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAACGCAAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Barash SC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000US-0251856P.
2000US-0251868P.
2000US-0251869P.
2000US-0251989P.
2000US-0251990P.
2000US-0251990P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000US-0249213P.
2000US-0249214P.
2000US-0249216P.
2000US-0249217P.
2000US-0249214P.
2000US-0249244P.
2000US-0249245P.
2000US-0249264P.
2000US-0249265P.
2000US-0249269P.
2000US-0249269P.
2000US-0249269P.
2000US-0250160P.
2000US-0251030P.
2000US-0251030P.
2000US-0256719P.
2000US-0256719P.
                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENOME SCI
                                                                                                                                                                                                                                    144
                                                                                                                                                                                   15.2%;
                                                                                                                                                                                                                                  A; 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INC
                                                                                                                                                                                                                                  ü
                                                                                                                                                                      <u>,</u>
                                                                                                                                                                                   Score 429; DB 4;
Pred. No. 2.2e-65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MS
                                                                                                                                                                                                                                  97 G;
                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                    109
                                                                                                                                                                                                                                  T; o
                                                                                                                                                                                                                                  u; o
                                                                                                                                                                                                 Length 429;
                                                                                                                                                                                                                                    Other;
                                                                                                                                                                        Indels
                                                                                                                                                                      0
                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ĥ
                                                                             1505
                   1565
                                               120
                                                                                                           9
                                                                                                                                           1445
                                                                                                                                                                      0
```

2000US-0236802P. 2000US-0237037P.

2000US-0233065P 2000US-0234273P 2000US-023427P 2000US-023499P 2000US-023499P 2000US-023584P 2000US-0235836P 2000US-0236367P 2000US-0236369P 2000US-0236369P 2000US-0236369P 2000US-0236369P 2000US-0236369P

2000US-0237038P. 2000US-0237039P. 2000US-0237049P. 2000US-0239935P. 2000US-0239937P. 2000US-0241221P. 2000US-0241785P.

29-SBP-2000
29-SBP-2000
29-SBP-2000
29-SBP-2000
20-CCT-2000
20-CCT

2000US-0241786P.
2000US-0241787P.
2000US-0241809P.
2000US-0241826P.
2000US-02446174P.
2000US-0246475P.
2000US-0246477P.
2000US-0246477P.
2000US-0246477P.

2000US-0246526P 2000US-0246527P 2000US-0246528P 2000US-0246532P 2000US-0246609P 2000US-0246619P 2000US-0246611P 2000US-0249611P 2000US-0249613P 2000US-0249208P 2000US-0249208P

2000US-0246523P. 2000US-0246524P. 2000US-0246525P.

•		•	
***************************************	XX B XX B XX B X B X B X B X B X B X B	Qy Db Oy Db Db AALO	\$ \$ \$ \$ \$ \$ \$
31-JAN-2000; 2000US-0179665P. 24-FEB-2000; 2000US-0180628P. 24-FEB-2000; 2000US-018063EP. 12-MAR-2000; 2000US-0189874P. 17-MAR-2000; 2000US-0199873P. 17-MAR-2000; 2000US-0199133P. 19-MAY-2000; 2000US-020545P. 07-JUN-2000; 2000US-0214886P. 30-JUN-2000; 2000US-0216647P. 07-JUL-2000; 2000US-0216647P. 07-JUL-2000; 2000US-0216647P. 11-JUL-2000; 2000US-0216647P. 11-JUL-2000; 2000US-021664PP. 11-JUL-2000; 2000US-021664PP. 11-JUL-2000; 2000US-021664PP. 11-JUL-2000; 2000US-021664PP. 11-JUL-2000; 2000US-021664PP. 11-JUL-2000; 2000US-021664PP. 11-JUL-2000; 2000US-0217466P. 11-AUG-2000; 2000US-0218290P. 14-AUG-2000; 2000US-022513P. 14-AUG-2000; 2000US-022513P. 14-AUG-2000; 2000US-022513P. 14-AUG-2000; 2000US-0225266P. 14-AUG-2000; 2000US-0225268P. 14-AUG-2000; 2000US-0225268P. 14-AUG-2000; 2000US-0225275P. 14-AUG-2000; 2000US-0225375P. 14-AUG-2000; 2000US-022575P. 14-AUG-2000; 2000US-022575P.	eproductive systreproductive syreproductive syrepro	1746 TGAACACAGGTGTTCAAGGCCAGCCTGGGCAACATAACAAGATCCTGTCTCTCAAAAAAA 1805	121 CAATTGGAAGGTAGTTGCTTGAATGTTGGGGAAGAAAATCTATTGGCTCCTCGTGGGTC 180 1566 TCTTCATCTCAGAAATGCCAATCAGGTCAAGGTTTGCTACATTTTGTATGTGTGTG
			•
	·		
\(\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\te}\tint{\text{\text{\text{\text{\text{\text{\text{\text{\texit{\tett{\texitt{\text{\texit{\text{\texi}\text{\text{\texitt{\texit{\texit{\texi}\texitt{\texit{\texit{\texit{\texit{\texitet{	קל טי א מי מי מי מי מי מי מי מי מי א מי מי א מי מי א מי	מי מ	קק קק קק קק קקק קקק קקק קקק קקק קקק קק
02-0CT-2000 02-0CT-2000 02-0CT-2000 13-0CT-2000 13-0CT-2000 20-0CT-2000 20-0CT-2000 20-0CT-2000 20-0CT-2000 20-0CT-2000 20-0CT-2000 20-0CT-2000 20-0CT-2000 20-0CT-2000 20-0CT-2000 20-0CT-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NOV-2000 08-NO		報報 数数 数 数 2000	4-AUG-2000 2-AUG-2000 2-AUG-2000 2-AUG-2000 3-AUG-2000 3-AUG-2000 1-SEP-2000 1-SEP-2000 1-SEP-2000 1-SEP-2000 5-SEP-2000
2000US-0237037P. 2000US-0237038P. 2000US-0237039P. 2000US-0237039P. 2000US-0237039P. 2000US-024950P. 2000US-0241785P. 2000US-0241785P. 2000US-0241785P. 2000US-0241868P. 2000US-0241868P. 2000US-02441868P. 2000US-02441868P. 2000US-0244677P. 2000US-0246477P. 2000US-0246477P. 2000US-0246477P. 2000US-0246478P. 2000US-0246478P. 2000US-0246538P. 2000US-0246538P. 2000US-0246538P. 2000US-0246538P. 2000US-0246610P.	000US-02330000US-023322000US-023422000US-0234499000US-023548000US-0235883000US-023583000US-023583000US-023583000US-0235363000US-0235363000US-0235363000US-0235363000US-0235363000US-0235363000US-02353636000US-0235368000US-0235368000US-0235368000US-0235368000US-0235368000US-0235368000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-023568000US-02356000US-02356000US-02356000US-	000US-0231043 000US-0231243 000US-0231243 000US-0231243 000US-0231241 000US-0232141 000US-023208 000US-023208 000US-023208 000US-023208 000US-0232308 000US-02323308 000US-02323308 000US-02323300 000US-0232300	000US-022575 000US-022627 000US-022668 000US-022768 000US-022701 000US-022701 000US-02293 000US-022934 000US-022934 000US-022934 000US-022934

```
Query Match
Best Local S
Matches 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17-NOV-2000
01-DEC-2000
05-DEC-2000
06-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The present invention provides the protein and coding sequences of a number of human reproductive system related antigens. These can be used in the prevention and treatment of reproductive system disorders, including cancer. The present sequence is a genomic sequence encoding a protein of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Isolated nucleic acid molecule encoding a reproductive used in preventing, treating or ameliorating a medical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rosen
                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 13862 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (HUMA-) HUMAN
    1688
                                              1846
                                                                                                                                  1787
                                                                                                                                                                           1568
                                                                                                                                                                                                                   1727
                                                                                                                                                                                                                                                             1508
                                                                                        1628
                                                                                                                                                                                                                                                                                                       1667
                                                                                                                                                                                                                                                                                                                                            al Similarity
397; Conserv
                                                                                                                                                                       CTGAGGCAGGAGGATCACTTGAGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCGAA 1627
                                                                                                                                                                                                                                                         AAACTTAATAAGCTGGCTGGGCTCTGTGGCTCATGCCTGATCCCAGCACTTTGGGAGG
                                                                                                                                                                                                                                                                                              APACAGAATGATAAAGCTGCGAACCGTGGCACACGCTCATAGTTCTAGCTGCTTGGGAGG
                          TCACGCCTGTAATCCCAGCACTTTGGGAGGCCGAGCCGGGCGGATCACCTGTGGTCAGGA
                                                                                                                       TTGAGGAGGGAGGATGGCTTGAACACAGGTGTTCAAGGCCAGCCTGGGCAACATAACAAG
    TCATGCCTGTAATCCCAGCACTTTGGGAGGCCGAGGTGGGCGGATCACCTGAGGTCAGGA
                                                                                   10.5%;
nilarity 74.6%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Barash SC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO 5477; 1297pp + Sequence Listing; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000US-0249219P
2000US-0249211P
2000US-0249211P
2000US-0249211P
2000US-0249211P
2000US-0249211P
2000US-0249211P
2000US-0249218P
2000US-0249218P
2000US-0249248P
2000US-0249249P
2000US-0249249P
2000US-0249264P
2000US-0249269P
2000US-0249269P
2000US-0249299P
2000US-0249299P
2000US-0259391P
2000US-0259391P
2000US-0259391P
2000US-0259391P
2000US-0259391P
2000US-0259391P
2000US-025939P
2000US-0259399P
2000US-0251868P
2000US-0251989P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000US-0246611P.
2000US-0246613P.
2000US-0249207P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENOME
                                                                                                                                                                                                                                                                                                                                                                                                                                3188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ruben
                                                                                                                                                                                                                                                                                                                                                                                                                                A; 3560
                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                          Score 295.2; DB 4;
Pred. No. 5.9e-42;
0; Mismatches 133;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ×KS
                                                                                                                                                                                                                                                                                                                                                                                                                                Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                4465
                                                                                                                                                                                                                                                                                                                                                                                                                                <u>ი</u>
                                                                                                                                                                                                                                                                                                                                                                                    DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                              2649 T;
                                                                                                                                                                                                                                                                                                                                                                                  Length 13862;
                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                              U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               system antigen condition.
                                                                                                                                                                                                                                                                                                                                        2
                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                               1786
                                                                                                                                                                                                                                                                                                1726
                                                                                     1687
                                                                                                                                                                                                                                                           1567
                                                                                                                               1845
                                                                                                                                                                                                                                                                                                                                        2
RESULT 15
AAL07516
ID AAL07516
ID AAL07516
AC AAL07
AC AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
28-JUN-2000;
30-JUN-2000;
07-JUL-2000;
07-JUL-2000;
11-JUL-2000;
14-JUL-2000;
26-JUL-2000;
14-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                02-MAR-2000;
16-MAR-2000;
17-MAR-2000;
17-MAR-2000;
18-APR-2000;
19-MAY-2000;
07-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; reproductive system related antigen; reproductive system disorder; cancer; gene therapy; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human reproductive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAL07516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31-JAN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200155320-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAL07516;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCAGGCGTGGTAGCAGGCACCTGTAATCCCCAGCTACTTGGGAGGCTGAGGCAGGAGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTTCAAGACCAGCCTGGACAACATGGCAAAACCCTGTCTCTATTAAAAATACAAAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTTTGAGACCAGCCTGGCCAACATGGCAAAACCCCCGTCTGTACTCAAAATGCAAAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGAAAAATTAGCCAGCGTGGTGGCATGCACCTGTAGTCCTAGCTACTTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGAGAACAATATTTGGGAGAGAAGGATGGGGAAGCATTGCAAGGAAATTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGTTTGAAGCCAGGAGGTTTGCACCGAGCCGAGATTGTGCCACTGCACTCCAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGCTTGAACCCAGGAGGTGGAGGTTGCAGTAAGCTGAGATCGTGCCGTTGCACTCCAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCCAGGCTTTATGGTAGGCGCCTATAATCCCAGCTACTCGGAAGGCTGAGGCAGGAGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000US-0190076P.
2000US-0205515P.
2000US-0205467P.
2000US-02151356P.
2000US-0216447P.
2000US-0217486P.
2000US-0217496P.
2000US-0217496P.
2000US-0217496P.
2000US-0217496P.
2000US-0217496P.
2000US-0217496P.
2000US-02254519P.
2000US-0225513P.
2000US-0225267P.
2000US-0225267P.
2000US-0225759P.
2000US-0225759P.
2000US-0225759P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2001WO-US001339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000US-0186350P
2000US-0189874P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000US-0179065P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000US-0184664P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000US-0180628P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         system related antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₽P.
```

DNA SEQ ID NO:

10204

2038 2197

> 1986 2145 1927 2085 1867 2025 1807

밁 Ś 片 Ś 밁 á 밁 S 18-AUG-2000; 22-AUG-2000; 22-AUG-2000; 22-AUG-2000; 23-AUG-2000; 30-AUG-2000; 01-SEP-2000; 01-SEP-2000; 01-SEP-2000; 05-SEP-2000; 05-SEP-2000; 06-SEP-2000;

2000US-0226279P.
2000US-0226681P.
2000US-02268681P.
2000US-0227182P.
2000US-0227182P.
2000US-0227009P.
2000US-022934P.
2000US-0229343P.
2000US-0229344P.
2000US-0229345P.
2000US-0229345P.
2000US-0229347P.
2000US-0229347P.
2000US-0229347P.
2000US-0229347P.

```
밁
                                                                                                       Ş
                  Ś
                                         문
                                                          Ś
                                                                                                                                 맑
                                                                                                                                                    Ş
                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 397; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                     17-NOV-2000
17-NOV-2000
17-NOV-2000
17-NOV-2000
17-NOV-2000
17-NOV-2000
17-NOV-2000
01-DEC-2000
01-DEC-2000
05-DEC-2000
06-DEC-2000
08-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17-NOV-2000
                                                                                                                                                                                                                                                                                                                                   Isolated used in F
                                                                                                                                                                                                                                           The present invention provides the protein and coding sequences of number of human reproductive system related antigens. These can be in the prevention and treatment of reproductive system disorders, including cancer. The present sequence is a genomic sequence encodiprotein of the invention
                                                                                                                                                                                                                        Sequence 13862 BP;
                                                                                                                                                                                                                                                                                                               Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                            Rosen
1688
                    1846
                                                               1787
                                                                                                                                  1508
                                                                                                                                                        1667
                                                                                                                                                                                                                                                                                                                                                                                            β
                                                                                                                                                                                                                                                                                                                                   d nucleic acid molecule encoding a reproductive preventing, treating or ameliorating a medical
                                                                                   AAACTTAATAAGCTGGCTGGGCTCTGTGGCTCATGCCTGTGATCCCAGCACTTTGGGAGG
           AAACAGAATGATAAAGCTGCGAACCGTGGCACACGCTCATAGTTCTAGCTGCTTGGGAGG
TCATGCCTGTAATCCCAGCACTTTGGGAGGCCGAGGTGGGCGGATCACCTGAGGTCAGGA
                                         ACCCCATCTCTACTAAAAATACAAAAGTTAGCCAGGCATGGGCCGGGCATGGTGGG
                                                                                                                                                                                                                                                                                                                                                                                            Barash SC,
                                                                                                                                                                                                                                                                                                                                                                                                                                     2000US-0249249

2000US-0249245P

2000US-0249265P

2000US-0249297P

2000US-0249299P

2000US-0249299P

2000US-0259300P

2000US-0250309

2000US-0250309

2000US-0251988P

2000US-0251866P

2000US-0251866P

2000US-0251866P

2000US-0251869P

2000US-0251989P

2000US-0251989P

2000US-0251989P

2000US-0251989P

2000US-0251989P

2000US-0251989P

2000US-0251989P
                                                                                                                                                                                                                                                                                                               SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000US-0249213P.
2000US-0249214P.
2000US-0249215P.
2000US-0249216P.
2000US-0249218P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000US-0249208P.
2000US-0249209P.
2000US-0249210P.
2000US-0249211P.
2000US-0249212P.
                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000US-0246613P
2000US-0249207P
                                                                                                                                                                                                                                                                                                                                                                                                                  GENOME
                                                                                                                                                                                                                        3188 A; 3560 C;
                                                                                                                                                                                                                                                                                                             NO 10204; 1297pp + Sequence Listing; English
                                                                                                                                                                                      10.5%;
                                                                                                                                                                         ; Score 295.2; I
; Pred. No. 5.9e-
0; Mismatches
                                                                                                                                                                                                                         4465
                                                                                                                                                                          ?; DB 4;
5.9e-42;
hes 133;
                                                                                                                                                                                                                       G; 2649 T; 0
                                                                                                                                                                             Indels
                                                                                                                                                                                                Length 13862;
                                                                                                                                                                                                                       U; 0 Other
                                                                                                                                                                                                                                                                                                                                     system antigen condition.
                                                                                                                                                                            2
                                                                                                                                                                                                                                                         encoding
                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                             a
used
1747
                      1905
                                            1687
                                                                                      1627
                                                                                                            1786
                                                                                                                                  1567
                                                               1845
                                                                                                                                                       1726
                                                                                                                                                                                                                                                         þ
                                                                                                                                                                                                                                                                                                                                                  18
                                                                                                                                                                          2
```

2000US-0231244P 2000US-0231244P 2000US-0231244P 2000US-0231413P 2000US-0231419P 2000US-0232081P 2000US-0232398P 2000US-0232398P 2000US-0232398P 2000US-0232398P 2000US-0232398P 2000US-0232401P 2000US-0232401P 2000US-0232401P 2000US-0233064P 2000US-0233064P 2000US-0233064P 2000US-0233064P 2000US-0233064P 2000US-0233064P 2000US-0233064P 2000US-0233064P 2000US-023367P 2000US-0235836P 2000US-0236368P 2000US-0236370P 2000US-0236368P 2000US-0236368P 2000US-0236368P

06-SEP-2000
08-SEP-2000
08-SEP-2000
08-SEP-2000
08-SEP-2000
08-SEP-2000
08-SEP-2000
08-SEP-2000
11-SEP-2000
11-SEP-2000
11-SEP-2000
11-SEP-2000
11-SEP-2000
11-SEP-2000
11-SEP-2000
20-SEP-2000
21-SEP-2000
21-SEP-2000
22-SEP-2000
22-SEP-2000
22-SEP-2000
23-SEP-2000
23-SEP

2000US-0237037P 2000US-0237039P 2000US-0237039P 2000US-0237040P 2000US-0239937P 2000US-0241785P 2000US-0241786P 2000US-0241787P 2000US-0241787P 2000US-0241809P 2000US-0241809P 2000US-024184617P 2000US-0246474617P 2000US-0246477P 2000US-0246478P 2000US-0246478P 2000US-0246523P 2000US-0246523P 2000US-0246523P 2000US-0246523P 2000US-0246532P 2000US-0246532P

	AGAAAAATTAGCCAGCGTGGTGGCATGCACCTGTAGTCCTAGCTACTTGGG 2038	1987	及
	AGAGAACAATATTTGGGAGAAGGAATGGGGAAGCATTGCAAGGAAAATTGTG 2197	2146	8
1986	TGGGCGATAA-AGCGAGACTCTGTCTCAGAAAAAAAAAAA	1928	Д
2145	TGGGCGACAAGAGCAAGACTCTGTCTCAGAAAAAAAAAA	2086	Ş
1927	CGTTTGAAGCCAGGAGGTTTGCACCGAGCCGAGATTGTGCCACTGCACTCCAGCC	1868	뭥
2085	CGCTTGAACCCAGGAGGTGGAAGGTTGCAGTAAGCTGAGATCGTGCCGTTGCACTCCAGCC	2026	Ş
1867	GCCAGGCTTTATGGTAGGCGCCTATAATCCCCAGCTACTCGGAAGGCTGAGGCAGGAGAAT	1808	B
2025	GCCAGGCGTGGTAGCAGGCACCTGTAATCCCCAGCTACTTGGGAGGCTGAGGCAGGAGGAGTA	1966	Ş
1807	GTTCAAGACCAGCCTGGACAACATGGCAAAAACCCTGTCTCTATTAAAAATACAAAAATTA	1748	망
1965	GTTTGAGACCAGCCTGGCCAACATGGCAAAACCCCCGTCTGTACTCAAAATGCAAAAAATTA	1906	8

Search completed: March 7, 2004, 06:55:59 Job time: 1065 secs

```
Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Run
                                                                                                                                                                                                                                                                                                                                                                                                           Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OM nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Total number of hits satisfying chosen parameters:
                                                                                                 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
    000
                                                                                                                                                                                                                                                                                                                                                                                             ö.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   91:
     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BB BB
    Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         seq
seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ı
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                           Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Issued_Patents_NA:*

1: /cgn2_6/ptodata/2/ina/5A_COMB.seq:*

2: /cgn2_6/ptodata/2/ina/5B_COMB.seq:*

3: /cgn2_6/ptodata/2/ina/6A_COMB.seq:*

4: /cgn2_6/ptodata/2/ina/6B_COMB.seq:*

5: /cgn2_6/ptodata/2/ina/PCTUS_COMB.seq:*

6: /cgn2_6/ptodata/2/ina/backfiles1.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-966-880A-7
2818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           682709 seqs, 277475446 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   March
    Copyright
                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7, 2004, 06:31:31; Search time 217 Seconds (without alignments) 7206.689 Million cell updates/sec
  GenCore version 5.1.6 (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                             DB
US-09-817-180-3
US-09-078-294-7
US-09-078-294-7
US-09-735-934A-3
US-09-735-934A-3
US-09-735-936B-8
US-09-9813-917-3
US-09-808-285A-8
US-09-350-836B-8
US-09-370-265-8
US-09-370-265-8
US-09-370-625A-8
US-09-557-800C-4
US-09-557-800C-4
US-09-557-800C-4
US-09-557-800C-4
US-09-557-800C-4
US-09-758-5058A-5
US-09-780-172-18
US-09-780-172-18
US-09-780-172-18
US-09-735-934A-3
US-09-738-934A-3
US-09-738-096-10
US-08-618-1100B-3
US-08-618-1100B-3
US-08-618-1100B-3
US-08-525-058A-5
                                                                                                                                                                                                                                                                                                                                                                                                                                        SUMMARIES
  Sequence
Sequence
Sequence
Sequence
                                                      Sequence
Sequence
Sequence
                                                                                                Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                          Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                             Description
                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                               Sequence
 3; Appli
3, Appli
3, Appli
3, Appli
3, Appli
3, Appli
8, Appli
10, Appli
11, Appli
11
               Ş
                                            닭
                                                                   8
                                                                                                밁
                                                                                                                        á
                                                                                                                                                      문
                                                                                                                                                                            5
                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-817-180-3
                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 370
                                                                                                  11877
                                                                                                                                                       11826
                                                                                                                                                                                                                                                                    11711
                                                                                                                                                                                                                                                                                                                         11651
                                                                                                                                                                                                              11771
                                                                                                                            1881
                                                                                                                                                                                   1821
                                                                                                                                                                                                                                                                                              1701
                  2001
```

					G											ი	
45	44	43	42	41	40	39	38	37	36	9	4	33	32	31	30	29	28
252	252	252	252	253	253	253	253		253		254	54	256	256	256	256	256
'n	.2	N	'n	'n	2	'n	'n	'n	60	00	.4	œ	80	80	œ	œ	00
8.9	8.9	8.9	8.9	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.1	9.1	9.1	9.1	9.1
14581	721	721	72	22484	22484	22481	22481	14581	16063	16063	98844	118067	29629	2962	817	81	81
81	10	0	7210	4.	42	18	19	8	5	5	44	5	29	29	74	174	174
4.	u	4.	N	4	4	மு	4.	4.	4.	4	4.	4.	4	4	ហ	w	N
US-08-520-373D-4	PCT-US95-07201-10	US-08-367-841A-1	US-08-257-963B-10	US-09-875-114-	US-09-875-223-2	PCT-US95-07201-43	US-08-367-841A-43	US-08-520-373D-	US-10-020-121-3	US-09-801-052-3	US-09-791-211-10	US-09-497-855A-32	US-10-135-689-3	0S-09	PCT-US91-00899-	US-09-042-531-5	B0-SD
-520	S95-	-367	-257	-875	-875	S95-	-367	-520	-020	-801	-791	-497	-135	-09-729-995-3	-168	-042	08-696-731-
-373	0720	-841	-963	-114	-223	0720	-841	-373	-121	-052	-211	-855	-689	-995	5800	-531	-731
D-4	1-10	A-10	B-10	2	-2	1-43	A-43	D-4	ω̈́	<u>ٿ</u>	-10	A-32	ີ່ພ	ັ້ນ	9-3	ģ	'n
Seg	Seg	Seg	Seg	Seg	Seg	Seg	Seg	Seg	Seq	Seg	Seg	Seg	Seg	Seg	Seg	Seq	Seq
Sequence	Sequence	Seguence	Sequence	Seguence	Sequence	Seguence	Seguence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	equence
	e 10	e 10	9 10	N	'n	4.	e 43	04,	w W	ω ω	9 10	e 32	w	ω ω	ω v	ίο (i)	5
~	-	.` ≱	.~ ≱	App1	~	≱	`	App1	ΑĐ	Αp	-	•	App1:	Αp	ΑĐ	Αp	Αp
pli	App1	Iđá	1đá	ilq	p11	Appl	Appl	įĮį	pli	pli	Appl	App1	įŢġ	pli	011	P1i	pli

ALIGNMENTS

; TYPE: DNA ; ORGANISM: Human US-09-817-180-3 SOFTWARE: FASTSE SEQ ID NO 3 Sequence 3, Application US/09817180
Patent No. 6340584
GENERAL INFORMATION:
APPLICANT: GAN, Weiniu et al.
TITLE OF INVENTION: ISOLATED HUMAN KINASE PROTEINS, NUCLEIC
TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND
TITLE OF INVENTION: THEREOF
FILE REFERENCE: CL001183
CURRENT APPLICATION NUMBER: US/09/817,180
CURRENT FILING DATE: 2001-03-27
NUMBER OF SEQ ID NOS: 4 y Match 9.9%;
Local Similarity 74.9%;
hes 370; Conservative 1641 ATTAACTATATAAGAGAGTTGTGACAAAACAGAATGATAAAGCTGCGAACCGTGGCACAC FastSEQ for Windows Version 4.0 ACTTGGGAGGCTGAGGCAGGAGATCGCTTGAACCCAGGAGGTGGAGGTTGCAGTAAGCT ACTCCCTTAATGCCAACCTTCCCACCAGGCAGAATAAGAATAACCTGGCCAGTTGCTCAC ATCTCTACTAAAAATACAAAAATTAGCCAGGCATGGTGGCACGTGCCTGTAATCCCCAGCT GTCTGTACTCAAAATGCAAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAATCCCAGCT CCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAAAACCCC AAGAGAGAGGGCCGGGCGTGGTGGCTCACGCCTGTAATCCCAGCACTTTTGGGAGGCCGAG AAGATCAGCTTGGACAACACAGTGAAACTCCATCTGTACAAAAATACAAAAATA-----GCCTGTCATCCCAGCACTTTGGGAGGCTGAGCTGGGTGGATCACTTGAGCCCAGGAGTTC GCTCATAGTTCTAGCTGCTTGGGAGGTTGAGGAGGAGGATGGCTTGAACACAGGTGTTC -----GACTGGGCACGGTGGCTCACACCTGTAATCCCAGCACTTTGGGAGGCCGAG Score 280; DB 4; L Pred. No. 3e-52; 0; Mismatches 110; DB 4; Length 15297; Indels 14; Gaps 2060 11770 1760 2000 1940 1880 1700 11996 11936 11876 11825 11710

```
Sequence 3, Application US/10003295
; Sequence 3, Application US/10003295
; Patent NO. 6686187
; Patent NO. 1000 et al.
; Patent No. 1000 et al.
; Patent OF INVENTION: ISOLATED HUMAN KINASE PROTEINS, AND USES
; PILLE OF INVENTION: THEREOF
; PILLE OF INVENTION: THEREOF
; PILE OF INVENTION: THEREOF
; PILE REFERENCE: CLOO1183DIV
; CURRENT APPLICATION NUMBER: US/10/003,295
; CURRENT FILING DATE: 2001-12-06
; NUMBER OF SEQ ID NOS: 4
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 3
; LENGTH: 15297
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-003-295-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 2
US-10-003-295-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                             유
                                                                                                                                                                                                                                                                                                                         Ş
밁
                            8
                                                                    В
                                                                                                     Ś
                                                                                                                                             밁
                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 370;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                     11826
                                                                                                                                                                                                                                                                                                                                                                                                                                            11771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11997
                                                                                                                                               11997
                                                                                                                                                                                                                                                                                               11877
                                                                                                                                                                                                                      11937
                                                                                                                                                                                                                                                                                                                                                                                                          1821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1761
                                                                                                                                                                                                                                                                                                                                 1881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1641 ATTAACTATATAAGAGAGTTGTGACAAAACAGAATGATAAAGCTGCGAACCGTGGCACAC
                                                                                                                                                                                   2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCAAAAAACAAAAA 12130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAAAAAAAAAGAGA 2134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAGACTCTGTCTCAGAAAAAA 2120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCTCATAGTTCTAGCTGCTTGGGAGGTTGAGGAGGGAGGATGGCTTGAACACAGGTGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTCCCTTAATGCCAACCTTCCCACCAGGCAGAATAAGAATAACCTGGCCAGTTGCTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACTTGGGAGGCTGAGGTGGGAGAATTGCTTGAACCCAGGAGGCGGAGGCTGCAGTGAGCC 12056
                                                                                                         GAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAGACTCTGTCTCAGAAAAAA 2120
                                                                                                                                                                                                                      ATCTCTACTAAAAATACAAAATTAGCCAGGCATGGTGGCACGTGCCTGTAATCCCAGCT
                                                                                                                                                                                                                                                                                               AAGAGAGAGGGCCGGGCGTGGTGGCTCACGCCTGTAATCCCCAGCACTTTGGGAGGCCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCTGTCATCCCAGCACTTTGGGAGGCTGAGCTGGGTGGATCACTTGAGCCCAGGAGTTC
                                AAAAAAAAAAGAGA 2134
                                                                                                                                               ACTTGGGAGGCTGAGGTGGGAGATTGCTTGAACCCCAGGAGGCGGAGGCTGCAGTGAGCC
                                                                                                                                                                        ACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCCAGGAGGTGGAGGTTGCAGTAAGCT
                                                                                                                                                                                                                                                   GTCTGTACTCAAAATGCAAAAATTAGCCAGGCTGGTAGCAGGCACCTGTAATCCCAGCT
                                                                                                                                                                                                                                                                                                                               CCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAAAACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGATCAGCTTGGACAACACAGTGAAACTCCATCTGTACAAAAATACAAAAATA-----
CCAAAAACAAAA 12130
                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                       GACTGGGCACGGTGGCTCACACCTGTAATCCCAGCACTTTGGGAGGCCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 280; DB 4; Length 15297; Pred. No. 3e-52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches 110;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14;
                                                                                                                                                                                                                                                                                                                                                                                                          1880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1760
                                                                        12116
                                                                                                                                                                                     2060
                                                                                                                                                                                                                      11996
                                                                                                                                                                                                                                                                                               11936
                                                                                                                                                                                                                                                                                                                                   1940
                                                                                                                                                                                                                                                                                                                                                                                                                                              11825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1700
                                                                                                                                               12056
                                                                                                                                                                                                                                                            2000
                                                                                                                                                                                                                                                                                                                                                                       11876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11770
```

```
FILE REFERENCE: Davies Col
CURRENT APPLICATION NUMBER: US/09/078,294
CURRENT FILING DATE: 1998-05-13
NUMBER OF SEQ ID NOS: 29
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 7
LENGTH: 11811
TYPE: DNA
ORGANISM: BAC-F2 contig 3
                                                             В
                                                                                            8
                                                                                                                              밁
                                                                                                                                                        S
                                                                                                                                                                                                뮍
                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                 片
                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-078-294-7/c
밁
                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-078-294-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 7, Application US/09078294
Patent No. 6265211
GENERAL INFORMATION:
APPLICANT: Choo, Kong-Hong Andy
APPLICANT: Du Sart, Desiree
APPLICANT: Cancilla, Michael R.
TITLE OF INVENTION: A NOVEL NUCLEIC ACID MOLECULE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 350;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 9.7%;
Best Local Similarity 79.7%;
                                                                                                                                                                                                                                                                   6488
                                                                                                                                                                                                                                                                                                                                                                                                   6603
                                                               6308
                                                                                                                                6368
                                                                                                                                                               1991
                                                                                                                                                                                                 6428
                                                                                                                                                                                                                                  1932
                                                                                                                                                                                                                                                                                                  1872
                                                                                                                                                                                                                                                                                                                                  6543
                                                                                                                                                                                                                                                                                                                                                                   1812
                                                                                                                                                                                                                                                                                                                                                                                                                                    1752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>AAAAAAAAAAAAAAAAAAAA</u>
                                                                                                GCAGTAAGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAGACTCTGTC
                                                                                                                                                                                                                             CAAAACCCCGTCTGTACTCAAAATGC-AAAAATTAGCCAGGGGTGGTAGCAGGCACCTGT
                                                                                                                                                                                                                                                                                                                                                                   AAAAAAAGAAAGAGAGAGAGGCCGGGCGTGGTGGCTCACGCCTGTAATCCCCAGCACTTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                    GTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGGCCGAGGTGGGAGAATGACTTGAGCT
                              ТСАGААЛАВААЛАЛАЛА 2129
                                                                 GCAGTGAGCCAAGATCATGCCATTGCACTCCAGCCTGGGCAACAAGAGCAAAAACTCTCAA 6249
                                                                                                                                  AATCCCAGCTACTCAGGAGGCTGAGGCAGGAAAATCACTTGAACCCAGGAAGAGGAGGTT
                                                                                                                                                        AATCCCAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCCAGGAGGTGGAGGTT
                                                                                                                                                                                                 TGAAACCCCATCTCTACTAAAAATACAAAAATTAGCCAGGCGTGGTGGCGGGGGCGCCTGT
                                                                                                                                                                                                                                                                   GAGGTCAAGGTGGGATCACCTGAGGTCAGGAGTTCGAGCCCAGCCTGGCCAACATGG
                                                                                                                                                                                                                                                                                            GAGGCCGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGG
                                                                                                                                                                                                                                                                                                                                  AAAGTTAG-----CTGGGGGCCAGGTGTGGTGGCGCACGCCTGTAATCCCAGCCCTTTGG
                                                                                                                                                                                                                                                                                                                                                                                                   CAGAAGTTCAAGACCAGCCTGGCCAACACAGAGACCTCATCTCTACAAAATACATTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ·.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 274.2; DB 3
Pred. No. 5.2e-51;
 6230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      83;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 11811;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                       1931
                                                                                                                                                                                                                                                                                                                                    6489
                                                                                                                                                                                                                                                                                                                                                                    1871
                                                                                                                                                                                                                                                                                                                                                                                                     6544
                                                                                                                                                                                                                                                                                                                                                                                                                                      1811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6604
                                                                                                                                                                                                     6369
                                                                                                                                                                                                                                     1990
                                                                                                                                                                                                                                                                      6429
                                                                                                 2110
                                                                                                                                                                    2050
                                                                                                                                    6309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2
```

```
US-09-735-934A-3/c

Sequence 3, Application US/09735934A

Sequence 3, Application US/09735934A

Sequence 3, Application US/09735934A

Patent No. 6372468

GENERAL INFORMATION:
APPLICANT: LI, Jiayin et al
APPLICANTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS,
TITLE OF INVENTION: THEREOF
FILE REFERENCE: CL000851

CURRENT APPLICATION NUMBER: US/09/735,934A

CURRENT APPLICATION NUMBER: US/09/735,934A

CURRENT FILING DATE: 2000-12-14

NUMBER OF SEQ ID NOS: 4

SOPTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 3

LENGTH: 43950

TYPE: DNA
```

AND

USES

RESULT

```
RESULT 5
US-10-060-332-3/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; ORGANISM: Homo US-09-735-934A-3
                                           멂
                                                                                  Ś
                                                                                                                             밁
                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              돲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
  Ś
                                                                                                                                                                                                                                                                                                  US-10-060-332-3
                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
APPLICANT: LI, Jiayin et al
APPLICANT: LI, Jiayin et al
ITTLE OF INVENTION: ISOLATED HUMAN KINASE PROTEINS, NUCLEIC
TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND USES
TITLE OF INVENTION: THEREOF
FILE REFERENCE: CLOOMS:IDIV
CURRENT APPLICATION NUMBER: US/10/060,332
CURRENT FILING DATE: 2002-02-01
NUMBER OF SEQ ID NOS: 4
NUMBER OF SEQ ID NOS: 4
NUMBER OF SEQ ID NOS: 4
NUMBER: FASTSEQ for Windows Version 4.0
SOFTWARE: FASTSEQ for Windows Version 4.0
SRQ ID NO 3
LENGTH: 43950
TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                       Query Match
Best Local Similarity 77...
739; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 3, Application US/10060332
Patent No. 6528294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 339;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 9.6%;
Best Local Similarity 77.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17581
                                                                                                                           17761 GGGCACAGTGGCACACCTGTAATCCCAGAACTTTGGGAGGCTGAGGTGGGAGGATTGC 17702
                                                                                                                                                     1685 GCGAACCGTGGCACACGCTCATAGTTCTAGCTGCGTTGGGAGGTTGAGGAGGGATGGC
                                                                                  TTGAACACAGGTGTTCAAGGCCAGCCTGGGCAACATAACAAGATCCTGTCTCTCAAAAAA 1804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GETGGAGGTGCAGTAAGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGAGACAAGAGCA 2100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGCCAACATGGCAAAACCCCGTCTGTACTCAAAATGCAAAAATTAGCCAGGCGTGGTAGC 1980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAAAAAAAAAAAAAAAGA----AAGAGAGAGAGGGGCGGGGCGTGGTGGCTCGCCTGTAATCC 1860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTGAGCGCAGAAGTTCAAGACCACCCTGGGCAACATAGCAAGACCCCCTATCTTAAAAAA 17642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGCACAGTGGCACACACTGTAATCCCAGAACTTTGGGAGGCTGAGGTGGGAGGATTGC 17702
    AAAAAAAAAAAAAAGA----AAGAGAGAGGGCCGGGCGTGGTGGCTCACGCCTGTAATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGACTCTGTCTCAGA 2115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGGCACCTGTAATCCCAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGA 2040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GACCAACATGGCAAAACCCTGTCTCTACTAAAAATACAAAAAAGTAGCTGGGCCTGGGC 17462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGCACTTTGGGAGGCCGAGGCAGGTGGATTACCTGAGGTTGGGAGTTCAAGACCAGCCT 17522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGCACTTTGGGAGGCCGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAAAAAAAAAAAAAAAAGAAGAAGAATATAGGTCAGGCGCGGTGGCTCATGCCTGTAATCC
                                             TTGAGCGCAGAAGTTCAAGACCACCCTGGGCAACATAGCAAGACCCCCTATCTTAAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAACGCCGTCTAAAA 17327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GACAGAGGTTGCAATGAACTGAAATTGCATCACTGCACTCCAGCCTGGGCAACAAGAGCG 17342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGGTGCCTGTAGTCCCAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTGAACACAGGTGTTCAAGGCCAGCCTGGGCAACATAACAAGATCCTGTCTCTCAAAAAA 1804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sapiens
                                                                                                                                                                                                                                 9.6%;
                                                                                                                                                                                                           Score 269.8; DB 4;
Pred. No. 8.1e-50;
0; Mismatches 92;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 269.8; DB 4; Pred. No. 8.1e-50; 0; Mismatches 92;
                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                    Length 43950;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 43950;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4;
                                                                                                                                                                                                             4
                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:

APPLICANT: Donna T. Ward

APPLICANT: Andrew T. Watt

ITILE OF INVENTION: ANTISENSE MODULATION OF RECQL2 EXPRESSION

FILE REFERENCE: RTS-0207

CURRENT APPLICATION NUMBER: US/09/798,096

CURRENT FILING DATE: 2001-03-01

NUMBER OF SEQ ID NOS: 89

SEQ ID NO 10

LENGTH: 99500

TYPE: DNA

ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                   S
                                                              밁
                                                                                             5
                                                                                                                                              g
                                                                                                                                                                               र्
                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                   片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 6
US-09-798-096-10/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-798-096-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 10, Application US/09798096 Patent No. 6399378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 386; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17641 AAAAAAAAAAAAAAAAGAAGAAGGAATATAGGTCAGGCGCGGTGGCTCATGCCTGTAATCC
                                                                                                                                                                                                                                   43698 TTTTTTTTTTTTTTTAAAGTGGGGCTGGGCACGGTGGCTCACGCCTGTAATCCCCAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                              1721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1661 GTGACAAAACAGAATGATAAAGCTGCGAACCGTGGCACACGCTCATAGTTCTAGCTGCTT
CCTGTAATCCCAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGAGGTGG
                                                                                                                                                                                                                                                                                                                                                              GGCCAACATGGCAAAACCCCCGTCTGTACTCAAAAATGCCAAAAATTAGCCAGGCGTGGTAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGCACTITIGGGAGGCCGAGGCAGGTGGATTACCTCAGGGTTGGGAGTTCAAGACCAGCCT 17522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGCACTTTGGGAGGCCGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCT
                                                              ATGTGGTGAAACCCCGTCTTTACTAATAATATAAAAATTAGCCGGGCATGGTGGTGCGTG 4351;
                                                                                                                                                                                                                                                                                                                     CAGTGAGACCCTGTCACTAAAAAAAAAAAAAAAGTCTTAAGATCTTGATTTCTTTTTCT
                                                                                                                                                                                                                                                                                                                                                                                                       GGGGAGGCCAAGGCAGGAGGATTGCTTAAGTCCAGGAGTTCAAGACCAGCCTGGGCAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                            -GGGAGGTTGAGGAGGAGGATGGCTTGAACACAGGTGTTCAAGGCCAGCCTGGGCAACA 1779
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGGAAAAAAAAAAAGTCTTGGCTAGGCATGGTGGCTCATGACTGTAATCCCAGCCCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAACGCCGTCTAAAA 17327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGACTCTGTCTCAGA 2115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGTGGAGGTTGCAGTAAGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCA 2100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGGTGCCTGTAGTCCCAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCCAGGA 17402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGGCACCTGTAATCCCCAGCTACTTGGGAAGGCTGAGGCAGGAGAATCGCCTTGAACCCCAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GACCAACATGGCAAAACCCTGTCTCTACTAAAAATACAAAAAAAGTAGCTGGGCCTGGGC 1746
                                                                                                     ACATGGCAAAACCCCGTCTGTACTCAAAATGCAAAAATTAGCCAGGCGTGGTAGCAGGCA 1985
                                                                                                                                                   CTTTGGGAGGCCAAGAAGGGTAGATCACCTGAGGTCAGGAGTTCGAGACCAGCCTGGCCA
                                                                                                                                                                                       CTTTGGGAGGCCGAGCCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCA 1925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GACAGAGGTTGCAATGAACTGAAATTGCATCACTGCACTCCAGCCTGGGCAACAAGAGCG 17342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9.6%;
73.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 269.2; DB 4;
Pred. No. 1.5e-49;
0; Mismatches 103;
                                                                                                                                                                                                                                                                          -eeecceeecereereecreeccreraarcccaeca 1865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 99500;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                       2045
                                                                                                                                                                                                                                                                                                                                                                                                     43759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17582
                                                                                                                                                   43579
                                                                                                                                                                                                                                     43639
                                                                                                                                                                                                                                                                                                                     43699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1920
                                                                                                                                                                                                                                                                                                                                                              1828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          43819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2
```

```
; SEQ ID NO 3
; LENGTH: 59065
; TYPE: DNA
; ORGANISM: Human
US-09-813-817-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                   片
                                                                                                                                                                                                                                                                                                                                                                                                   맑
                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
밁
                         8
                                                               밁
                                                                                           S
                                                                                                                               맑
                                                                                                                                                            8
                                                                                                                                                                                                  밁
                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                  B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 3, Applicat:
Patent No. 6340583
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches 351;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: YAN, Chunhua et al.
TITLE OF INVENTION: ISOLATED HUMAN KINASE PROTEINS, NUCLEIC
TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND
TITLE OF INVENTION: THEREOF
FILE REFERENCE: CL001178
CURRENT APPLICATION NUMBER: US/09/813,817
CURRENT FILING DATE: 2001-03-22
NUMBER OF SEQ ID NOS: 4
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -09-813-817-3/c
                                                                                                                                                                                                  23141
                                                                                                                                 23081
                                                                                                                                                                                                                                                                   23201
                                                                                                                                                                                                                                                                                                                                   23250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              43518
22961
                                                                 23021
                                                                                                                                                                                                                                                                                                                                                                  1800
                                                                                                                                                                                                                                                                                                                                                                                                                                   1740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1680
                                                                                                                                                                                                                                   1920
                                                                                                                                                                                                                                                                                                                                                                                                                            ATGGCTTGAACACAGGTGTTCAAGGCCAGCCTGGGCAACATAACAAGATCCTGTCTCTCA 1799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAAACTCTGTCTCAAAAAGAAAAAAAAA
                                                                                                                                                                                                                                                                                                                                                                  AAAAAAAAAAAAAAAAAAAAAGAGAGAGAGAGGGCCGGGCGTGGTGGCTCACGCCTGTAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGGCCAGGCATAGTGGCTCATGCCTATAATCCCCAGC-ATTCGAGAGGCCCAAGGAGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGGTTGCAGTGAGCTGAGATCGTGCCATTGCACTCCAGCCTGGGGGGACAAAAGTGAGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGGTTGCAGTAAGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCTGTAATCCCAGCTACTCGGGAGGCTGAGGCAGGAGAATCGCTTGAACCTGGGAGGTGG
                        AAGACTCTGTCTCAGAAAAAAAAAAAAAAA 2128
                                                                                                                                 CACATGCCTGTAATCCCAGCTACTCGAGAGGCTGAGACAGGAGAATCGCTTGAACCCAGG
                                                                                                                                                                                                                                 TGGCCAACATGGCAAAACCCCCGTCTGTACTCAAAATGCAAAAATTAGCCAGGCGTGGTAG
                                                                                                                                                                                                                                                                                                  CCAGCACTTTGGGAGGCCGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCC 1919
                                                                                                                                                                                                                                                                                                                                   TAAAAAATCAGTCAATCA------GGCCAGTCATGGTGGCTCACGCCTGTAATC
                                                                                                                                                                                                                                                                                                                                                                                                    ACTGCTTGAAGCCAGAAGTTTGAGACCAGCCTGGGTAACAAACCAAGACCCTATCTCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/09813817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGGTGGAGGTTGCAGTAAGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGC
                                                                                                                                                                 CAGGCACCTGTAATCCCAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGG
                                                                                                                                                                                                  TGACCAACATGGAGAAACCCTGTCTCTACTAAAAATACAAAATTAGCCAGGCGTGGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 267.4; DB 4
Pred. No. 3.1e-49;
0; Mismatches 86
22933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .
98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 59065;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             43355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                  1859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         USES
                                                                                                                                 23022
                                                                                                                                                               2039
                                                                                                                                                                                                                                 1979
                                                                                                                                                                                                                                                                   23142
                                                                                                                                                                                                                                                                                                                                   23202
                                                                                                                                                                                                                                                                                                                                                                                                   23251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              43399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          43459
                                                                                                                                                                                                  23082
                                                                                                2099
```

```
Ś
                                                                      В
                                                                                                    S
                                                                                                                                         밁
                                                                                                                                                                        8
                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                 片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; TYPE: DNA
; ORGANISM: Human
US-09-978-197-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 3
LENGTH: 59065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: YAN, Chunhua et al.

TITLE OF INVENTION: ISOLATED HUMAN KINASE PROTEINS, NUCLEIC
TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND USES
TITLE OF INVENTION: THEREOF
FILE REFERENCE: CL001178DIV
CURRENT APPLICATION NUMBER: US/09/978,197
CURRENT FILING DATE: 2001-10-17
PRIOR APPLICATION NUMBER: 09/813,817
PRIOR APPLICATION NUMBER: 09/813,817
PRIOR FILING DATE: 2001-03-22
NUMBER OF SEQ ID NOS: 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local v
                                                                                                                                                                                                                                                                                                                                                            23250
                                                                                                                                                                                                                                                                                                                                                                                                                                   23310
                                                                                                                                         23081
22961 GAMACTCTGTCTCAMAAAGAAAAAAAAA 22933
                                                                                                                                                                                                                                                                                        23201
                                                                                                                                                                                                                                                                                                                         1860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1680
                                                                                                                                                                                                                                                    1920
                                                                                                                                                                                                                                                                                                                                                                                                1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAGCTGCGAACCGTGGCACACGCTCATAGTTCTAGCTGCTTGGGAGGTTGAGGAGGGAAGG
                                 AAGACTCTGTCTCAGAAAAAAAAAAAAAA 2128
                                                                                         AGGTGGAGGTTGCAGTAAGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAAGAGC
                                                                                                                                           CACATGCCTGTAATCCCAGCTACTCGAGAGGGCTGAGACAGGAGAATCGCTTGAACCCAGG
                                                                                                                                                                        CAGGCACCTGTAATCCCAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGG
                                                                                                                                                                                                                                                                                        CCAGCACTTTGGAAGGCTGAGGCGGGCAGATCACCTGAGGTTGGAAGTTCGAGACTAGCC
                                                                                                                                                                                                                                                                                                                    CCAGCACTTTGGGAGGCCGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCC
                                                                                                                                                                                                                                                                                                                                                              TAAAAAATCAGTCAATCA------GGCCAGTCATGGTGGCTCACGCCTGTAATC
                                                                                                                                                                                                                                                                                                                                                                                              ACTGCTTGAAGCCAGAAGTTTGAGACCAGCCTGGGTAACAAACCAAGACCCTATCTCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGGCTTGAACACAGGTGTTCAAGGCCAGCCTGGGCAACATAACAAGATCCTGTCTCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGGCCAGGCATAGTGGCTCATGCCTATAATCCCCAGC-ATTCGAGAGGCCCAAGGAGGGAGG
                                                                                                                                                                                                               TGACCAACATGGAGAAACCCCTGTCTCTACTAAAAATACAAAAATTAGCCAGGCGTGGTGG
                                                                                                                                                                                                                                               TGGCCAACATGGCAAAACCCCCGTCTGTACTCAAAATGCAAAAATTAGCCAGGCGTGGTAG
                                                                      AGGCAGAGGTTGCGGTGAGCTGAGTTCGTGCCATTGCATTCCAGCCTGGGCAACAAGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 267.4; DB 4
Pred. No. 3.1e-49;
0; Mismatches 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;
98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     59065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                         2099
                                                                                                                                                                                2039
                                                                                                                                                                                                                                                      1979
                                                                                                                                                                                                                                                                                                                           1919
                                                                                                                                                                                                                                                                                                                                                                                                 1859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1799
                                                                        22962
                                                                                                                                             23023
                                                                                                                                                                                                                   23082
                                                                                                                                                                                                                                                                                        23142
                                                                                                                                                                                                                                                                                                                                                              23202
                                                                                                                                                                                                                                                                                                                                                                                                                                     2325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2
```

US-09-608-285A-8/c

IS Sequence 8, Application US/09608285A

Patent No. 6335013

GENERAL INFORMATION:
APPLICANT: Ford, John
APPLICANT: Mulero, Julio
APPLICANT: Yeung, George
TITLE OF INVENTION: METHODS AND MATERIALS RELATING TO CD39-LIKE
TITLE OF INVENTION: POLYPEPTIDES
FILE REFERENCE: 28110/36570

CURRENT APPLICATION NUMBER: US/09/608,285A
CURRENT FILING DATE: 2000-06-30

PRIOR APPLICATION NUMBER: 09/583,231
PRIOR FILING DATE: 2000-05-26
PRIOR APPLICATION NUMBER: 09/587,800
PRIOR APPLICATION NUMBER: 09/557,800
PRIOR APPLICATION NUMBER: 09/481,238

PRIOR FILING DATE: 2000-04-25
PRIOR FILING DATE: 2000-01-11

US-09-978-197-3/c

Sequence 3, Application Patent No. 6403353 GENERAL INFORMATION:

US/09978197

RESULT 8

```
RESULT 10
US-09-350-836B-8/c
; Sequence 8, Application US/09350836B
; Patent No. 6387645
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 8
LENGTH: 9365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 297;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OTHER INFORMATION: n = 09-608-285A-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQ ID NOS: 60
SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LOCATION: (9303)
OTHER INFORMATION: n = adenine or NAME/KEY: misc feature
LOCATION: (9311)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY: misc feature
LOCATION: (9214)
OTHER INFORMATION: n =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: misc_feature
LOCATION: (3409)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY: misc_feature LOCATION: (9303)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOCATION: (3409)
OTHER INFORMATION: n = adenine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OR APPLICATION NUMBER: PCT/U
OR FILING DATE: 1999-07-16
OR APPLICATION NUMBER: 09/35
OR FILING DATE: 1999-07-09
OR APPLICATION NUMBER: 09/27
OR APPLICATION NUMBER: 09/27
OR APPLICATION NUMBER: 09/27
OR APPLICATION NUMBER: 09/27
OR FILING DATE: 1999-02-04
OR FILING DATE: 1999-02-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 09/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: FILING DATE: 1999-
                                                                                                                                7442
                                                                                                                                                                  2114
                                                                                                                                                                                                                                        2054
                                                                                                                                                                                                                                                                                                                1994
                                                                                                                                                                                                                                                                                                                                                      7622
                                                                                                                                                                                                                                                                                                                                                                                          1936
                                                                                                                                                                                                                                                                                                                                                                                                                              7682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAAAAAAAAAAAAA 2129
                                                                                                                                                                                                      GTGAGCYGWGATCRYGCCAYTGCACTCCAGCCYRGGMAACAAGAGCRAGACTCCGTCTCA
                                                                                                                                                                                                                                        GTAAGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAGACTCTGTCTCA 2113
                                                                                                                                                                                                                                                                                                                CCCAGCTACTTGGGAGGCTGAGGCAGGAGATCGCTTGAACCCAGGAGGTGGAGGTTGCA 2053
                                                                                                                                                                                                                                                                                                                                                                                    ACCCCGTCTGTACTCAAAATGC--AAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAAT 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAA 1935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAMCGAMCAAAAAAGGCYRGGMGTGGTGGCTCAYRCCTRTAATYCYAGCACTTTGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -----AGAGAGGCCGGGCGTGGTGGCTCACGCCTGTAATCCCCAGCACTTTGGGAGG 1875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAAAAATAATAAA 7427
                                                                                                                                                                                                                                                                              CCCAGCTACTYGGGAGGCTGAGGCAGRAGAATCGCTTGAACCCCAGGAGGYGRAGGYTGCA
                                                                                                                                                                                                                                                                                                                                                      ACCCCGTCTCTACTAAAAATACAAAAAAATTAGCCRGGCGTGGTGGCGCRYGCCTGTAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-07-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1999-08-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9.4%; Score 265.6; DB 4
79.0%; Pred. No. 3.8e-49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           adenine or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         adenine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   09/118,205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     09/122,449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         09/244,444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             09/273,447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 09/350,836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PCT/US99/16180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       09/370,265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             34; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            guanine or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         guanine or cytosine or thymidine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                guanine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     guanine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cytosine or thymidine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cytosine or thymidine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                34; Indels 11; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cytosine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 9365;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     or thymidine
                                                                                                                                                                                                      7443
                                                                                                                                                                                                                                                                              7503
                                                                                                                                                                                                                                                                                                                                                    7563
                                                                                                                                                                                                                                                                                                                        NAME/KEY: misc feature
LOCATION: (9303)
OTHER INFORMATION: n= adenine or guanine or
NAME/KEY: misc feature
LOCATION: (9311)
OTHER INFORMATION: n= adenine or guanine or
US-09-350-836B-8
                                  밁
                                                                                                          밁
                                                                                                                                              Ś
                                                                                                                                                                                 맑
                                                                    Ś
                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/350,836B
CURRENT FILING DATE: 1999-07-09
PRIOR APPLICATION NUMBER: 09/273,447
PRIOR FILING DATE: 1999-03-19
PRIOR APPLICATION NUMBER: 09/118,205
PRIOR FILING DATE: 1998-07-16
PRIOR APPLICATION NUMBER: 09/122,449
PRIOR PRIOR PILING DATE: 1998-07-24
PRIOR PILING DATE: 1998-07-24
PRIOR PILING DATE: 1998-07-24
PRIOR PILING DATE: 1999-02-04
NUMBER OF SEQ ID NOS: 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: Pat
SEQ ID NO 8
LENGTH: 9365
                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 297; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Ford, John
APPLICANT: Mulero, Julio
TITLE OF INVENTION: METHODS AND MATERIALS RELATING TO NOVEL CD39-LIKE
TITLE OF INVENTION: POLYPEPTIDES
FILE REFERENCE: 28110/35761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY:
LOCATION:
NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                              OTHER INFORMATION: n= adenine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OTHER INFORMATION: n= adenine or guanine or cytosine or thymine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OCATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OCATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OCATION
                                                                                                                                                                                                                  7742 AAMCGAMCAAAAAAGGCYRGGMGTGGTGGCTCAYRCCTRTAATYCYAGCACTTTGGGAGG
                                                                                                                                                                                   exon (1)..(288)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PatentIn Ver. 2.0
ACCCCGTCTGTACTCAAAATGC--AAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAAT
                                                        CCGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAA
                                                                                                                                  (3409)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (6966) .. (7138)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (8556) .. (9365)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (4894) .. (4995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (2863) .. (2942)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (1820)..(1855)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (5847) .. (5987)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (3889)..(3950)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (2467) .. (2555)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (1281) .. (1580)
                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         feature
                                                                                                                                                                                                                                                                          9.4%; Score 265.6; DB 4
79.0%; Pred. No. 3.8e-49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                              guanine
                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                            DB 4;
                                                                                                                                                                                                                                                                                                                                                  cytosine or thymine
                                                                                                                                                                                                                                                                                                                                                                                                         cytosine or thymine
                                                                                                                                                                                                                                                                                                                                                                                                                                                              cytosine or thymine
                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                            Length 9365
```

밁 Ś 밁 5 片 S

8 밁 Ś 뮍 Ś

11;

Gaps

2

1935 7683 1875 7743

7623

Ś 밁

```
뭕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 11
US-09-370-265-8/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EARLIER APPLICATION NUMBER: 09/350,836
EARLIER FILING DATE: 1999-07-09
EARLIER APPLICATION NUMBER: 09/273,447
EARLIER FILING DATE: 1999-03-19
EARLIER APPLICATION NUMBER: 09/244,444
EARLIER FILING DATE: 1999-02-04
EARLIER FILING DATE: 1998-07-24
EARLIER FILING DATE: 1998-07-24
EARLIER FILING DATE: 1998-07-24
EARLIER APPLICATION NUMBER: 09/118,205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
APPLICANT: FORG, John
APPLICANT: Mulero, Julio
TITLE OF INVENTION: METHODS AND MATERIALS RELATING
TITLE OF INVENTION: POLYPEPTIDES
FILE REFERENCE: 28111/35908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 8, Application US/09370265 Patent No. 6447771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/370,265
CURRENT FILING DATE: 1999-08-09
EARLIER APPLICATION NUMBER: PCT/US99/16180
EARLIER FILING DATE: 1999-07-16
EARLIER APPLICATION NUMBER: 09/350,836
EARLIER FILING DATE: 1999-07-09
EARLIER FILING DATE: 1999-07-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EARLIER FILING DATE: 1998-07-16
NUMBER OF SEQ ID NOS: 37
 FEATURE:
NAME/KEY:
LOCATION:
                                                          NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
ORGANISM: Homo
                                                                                                                                                                                                                                 NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: CDS
LOCATION: (72)..(287)
                                                                                                                                                                                                                                                                                        NAME/KEY: CDS
LOCATION: (2466)..(2555)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 9365
                                                                                                                                     NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: CDS
                                                                                                                                                                                          NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: CDS
                                                                                                                   OCATION:
                                                                                                                                                                          OCATION:
                                                                                                                                                                                                                                                                                                                                                                                                        OCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7442 AAAAAATAATAAA 7427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PatentIn Ver. 2.0
                                                                              CDS
                                                                                                                                       Sdo
                                                                                                                                                                                            CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCAGCTACTYGGGAGGCTGAGGCAGRAGAATCGCTTGAACCCAGGAGGYGRAGGYTGCA 7503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCCAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGAGGTGGAGGTTGCA 2053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCCCGTCTCTACTAAAAATACAAAAAATTAGCCRGGCGTGGTGGCGCRYGCCTGTAAT
   CDS
(6965)..(7138)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAAAAAAAAAAAAAAA 2129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTGAGCYGWGATCRYGCCAYTGCACTCCAGCCYRGGMAACAAGAGCRAGACTCCGTCTCA 7443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTAAGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGAACAAGAGCAAGAGCTCTGTCTCA 2113
                                                                                                                                                                                                                                 CDS
(2863)..(2940)
                                                                                                                                                                                                                                                                                                                                               (1819)..(1854)
                                                                                                                                                                                                                                                                                                                                                                                                        (1280) .. (1579)
                                                                                                                   (4896) .. (4994)
                                                                                                                                                                        (3887)..(3952)
                                                          (5846) .. (5986)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TO NOVEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CD39-LIKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          占
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY: misc_feature; LOCATION: (931I); LOCATION: (931I); OTHER INFORMATION: n = adenine or guanine or cytosine or thymine US-09-370-265-8
CURRENT APPLICATION NUMBER: US/09/557,800C
CURRENT FILING DATE: 2000-04-25
PRIOR APPLICATION NUMBER: 09/481,238
PRIOR FILING DATE: 2000-01-11
PRIOR APPLICATION NUMBER: 09/370,265
PRIOR FILING DATE: 1999-08-09
PRIOR APPLICATION NUMBER: PCT/US99/16180
PRIOR APPLICATION NUMBER: PCT/US99/16180
PRIOR FILING DATE: 1999-07-16
                                                                                                                                                                                                                                                                                                                            US-09-557-800C-8/c
                                                                                                                                                                                                                                                                                                                                                 RESULT 12
                                                                                                                                                                                                                                                                     Sequence 8, Application Patent No. 6476211 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                   APPLICANT: Ford, John
APPLICANT: Mulero, Julio
APPLICANT: Yeung, George
TITLE OF INVENTION: Methods and Materials Relating to CD39-Like
TITLE OF INVENTION: Polypeptides
FILE REFERENCE: 28110/36457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
NAME/KEY: (
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: misc feature LOCATION: (9214)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PEATURE: misc feature LOCATION: (3409)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCATION: (9303)
OTHER INFORMATION: n = adenine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KBY: misc_feature
LOCATION: (9303)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OTHER INFORMATION: n = adenine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION: n = adenine or guanine or cytosine or thymine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           y Match 9.4%; Score 265.6; DB 4; Local Similarity 79.0%; Pred. No. 3.8e-49; hes 297; Conservative 34; Mismatches 34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1876
                                                                                                                                                                                                                                                                                                                                                                                                        7442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7742 AAMCGAMCAAAAAAGGCYRGGMGTGGTGGCTCAYRCCTRTAATYCYAGCACTTTGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1824 -----AGAGAGGGCCGGGCGTGGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGG 1875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CYGAGGYGGGTGGATCACCTGAGRTCAGRAGTTYRAGAMYAGCCTGGCCAACATGGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDS
                                                                                                                                                                                                                                                                                                                                                                                                        AAAAATAATAATAA 7427
                                                                                                                                                                                                                                                                                                                                                                                                                                            GAAAAAAAAAAAAAA 2129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCCAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCCAGGAGGTGGAGGTTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCCCGTCTGTACTCAAAATGC--AAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (8556)..(8639)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTGAGCYGWGATCRYGCCAYTGCACTCCAGCCYRGGMAACAAGAGCRAGACTCCGTCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTAAGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAGACTCTGTCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCCAGCTACTYGGGAGGCTGAGGCAGRAGAATCGCTTGAACCCAGGAGGYGRAGGYTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCCCGTCTCTACTAAAAATACAAAAAATTAGCCRGGCGTGGTGGCGCRYGCCTGTAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAA 1935
                                                                                                                                                                                                                                                                                                            US/09557800C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    or guanine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             guanine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cytosine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cytosine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 9365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    or thymine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               or thymine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1823
```

2

```
ঠ
                                                             맑
                                                                                         Ś
                                                                                                                            밁
                                                                                                                                                        Ś
                                                                                                                                                                                         맑
                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                          뭕
                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                    S
 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-557-800C-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 09/350836
PRIOR FILING DATE: 1999-07-09
PRIOR APPLICATION NUMBER: 09/273447
PRIOR APPLICATION NUMBER: 09/273447
PRIOR APPLICATION NUMBER: 09/122449
PRIOR APPLICATION NUMBER: 09/244444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 297; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR FILING DATE: 1999-02-04
PRIOR APPLICATION NUMBER: 09/118,205
PRIOR FILING DATE: 1998-07-16
NUMBER OF SEQ ID NOS: 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 9365
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCATION: (9311)
OTHER INFORMATION: n = adenine or guanine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: misc feature LOCATION: (9311)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCATION: (9303)
OTHER INFORMATION: n =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: misc_feature
LOCATION: (9214)
OTHER INFORMATION: n =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: misc_feature
LOCATION: (3409)
OTHER INFORMATION: n =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: misc_feature LOCATION: (9303)
                                                                                                                                                                                           7622
                                                                                                                                                                                                                           1936
                                                                                                                                                                                                                                                                                          1876
                                                                                                                                                                                                                                                                                                                                                         1824
                                                               7502
                                                                                                                            7562
                                                                                                                                                           1994
                                                                                                                                                                                                                                                          7682
                                                                                                                                                                                                                                                                                                                                                                                                               2114 САЛАЛАЛАЛАЛАЛА 2129
                                                                                           2054 СТАЛССТСЯСЯТССТССТТССЛСТССЛССТСССЯССЕЛСАЛСЛССЛСЛСТСТСТСТСЛ 2113
                                                                                                                                                                                                                                                                                                                      7742 AAMCGAMCAAAAAGGCYRGGMGTGGTGGCTCAYRCCTRTAATYCYAGCACTTTGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                     PatentIn Ver. 2.0
                                                                                                                                                                                        ACCCCGTCTCTACTAAAAATACAAAAATTAGCCRGGCGTGGTGGCGCCRYGCCTGTAAT 7563
                                                                                                                                                                                                                                                       CYGAGGYGGGTGGATCACCTGAGRTCAGRAGTTYRAGAMYAGCCTGGCCAACATGGTGAA 7623
                                                                                                                                             CCCAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGAGGTGGAGGTTGCA
                                                                                                                                                                                                             ACCCCGTCTGTACTAAAATGC--AAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAAT
AAAAAATAATAATAAA
                                                                                                                         CCCAGCTACTYGGGAGGCTGAGGCAGRAGAATCGCTTGAACCCAGGAGGYGRAGGYTGCA
                                                                                                                                                                                                                                                                                 CCGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAA 1935
                                                                                                                                                                                                                                                                                                                                           ------AGAGAGGCCGGGCGTGGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGG 1875
                                                             GTGAGCYGWGATCRYGCCAYTGCACTCCAGCCYRGGMAACAAGAGCRAGACTCCGTCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                  9.4%; Score 265.6; DB 4 ilarity 79.0%; Pred. No. 3.8e-49; Conservative 34; Mismatches 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   adenine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  adenine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               adenine
7427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               or guanine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               or guanine or cytosine or thymidine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              guanine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                or cytosine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cytosine
                                                                                                                                                                                                                                                                                                                                                                                                                                                    34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cytosine
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 9365;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                or thymidine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               or thymidine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              or thymidine
                                                                                                                                                                                                                                                                                                                                                                                                                                                  11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                             7443
                                                                                                                                                          2053
                                                                                                                                                                                                                       1993
                                                                                                                                                                                                                                                                                                                    7683
                                                                                                                            7503
                                                                                                                                                                                                                                                                                                                                                                                                                    1823
                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>ب</u>
```

RESULT 13 US-09-370-625A-8/c

Sequence 8, Application US/09370625A Patent No. 6600032 GENERAL INFORMATION: APPLICANT: Ford, John

유 성

1823

```
SOPTWARE: PatentIn Ver. 2.0
SEQ ID NO 8
LENGTH: 9365
TYPE: DNA
ORGANISM: Homo sapiens
PEATURE:
NAME/KEY: exon
LOCATION: (1)..(288)
                                                           US-09-370-625A-8
 Query Match
Best Local Sim
Matches 297;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Mulero, Julio
TITLE OF INVENTION: METHODS AND MATERIALS RELATING TO NOVEL CD39-LIKE POLYPEPTIDES
FILE REFERENCE: 28110/35908
CURRENT APPLICATION NUMBER: US/09/370,625A
CURRENT FILLING DATE: 1999-08-09
PRIOR APPLICATION NUMBER: PCT/US99/16180
PRIOR FILING DATE: 1999-07-16
PRIOR PILING DATE: 1999-07-16
PRIOR APPLICATION NUMBER: 09/350,836
PRIOR APPLICATION NUMBER: 09/350,836
PRIOR PILING DATE: 1999-07-09
PRIOR PILING DATE: 1999-03-19
PRIOR FILING DATE: 1999-03-19
                                                                      NAME/KEY: misc feature
LOCATION: (9311)
OTHER INFORMATION: n =
                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOCATION: FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY:
LOCATION:
                                                                                                                             NAME/KEY: misc_feature
LOCATION: (9303)
OTHER INFORMATION: n =
                                                                                                                                                                                                                                              NAME/KEY: misc_feature
LOCATION: (3409)
OTHER INFORMATION: n =
                                                                                                                                                                                                                                                                                                                                       LOCATION:
FEATURE:
                                                                                                                                                                                        OTHER INFORMATION: n =
                                                                                                                                                                                                                                                                                                                     NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY:
                                                                                                                                                                                                        NAME/KEY: misc_feature
LOCATION: (9214)
                                                                                                                                                                                                                                      EATURE
                                                                                                                                                                                                                                                                                                                                                                                 PEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCATION: (1281)..(1580)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY:
                                                                                                                                                                                                       OCATION:
                                                                                                                                                                                                                                                                                                           OCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ZEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                          OCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OCATION:
              Similarity
                                                                                                                                                                                                                                                                                                      exon
(8556)..(9365)
                                                                                                                                                                                                                                                                                                                                                   exon
(6966)..(7138)
                                                                                                                                                                                                                                                                                                                                                                                             exon (5847)..(5987)
                                                                                                                                                                                                                                                                                                                                                                                                                                         exon (4894)..(4995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             exon (2863)..(2942)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        exon (2467)..(2555)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  exon (1820)..(1855)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (3889) .. (3950)
  Conservative
              9.4%;
                                                                         þ
                                                                                                                                                                                                                                                 b
                                                                                                                                മ
                                                                                                                                                                                        ρυ
                                                                                                                                                                                                                                                 or
                                                                         ç
                                                                                                                                o
                                                                                                                                                                                        မ္
                                                                      ιQ
                                                                                                                               g
                                                                                                                                                                                        ω
                                                                                                                                                                                                                                                 ω
 Score 265.6; DB 4;
Pred. No. 3.8e-49;
Pred. No. 3.8e-49;
                                                                                                                                                                                                                                                 ę
                                                                         or t
                                                                                                                                å
                                                                                                                                                                                        S,
                                                                         õ
                                                                                                                                                                                                                                                 유
                                                                                                                                  ç
                                                                                                                                                                                         or
  Indels
                            Length 9365;
 11;
Gaps
N
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                          NAME/KEY: misc feature; LOCATION: (13641); OTHER INFORMATION: n = US-09-608-285A-42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 42, Application US/09608285A Patent No. 6335013
                                                                                                                                                                                                                    SOFTWARE: 1
SEQ ID NO 42
Query Match 9.0
Best Local Similarity 79.0
Matches 297; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 1999-0 PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR FILING DATE: 2000-0
PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 2000-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR FILLING NUMBER: 09/:
PRIOR APPLICATION NUMBER: 09/:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/608,285A
CURRENT ETILING DATE: 2000-06-30
PRIOR APPLICATION NUMBER: 09/583,231
PRIOR FILING DATE: 2000-05-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          09-608-285A-42/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: METHODS AND MATERIALS RELATING TO CD39-LIKE TITLE OF INVENTION: POLYPEPTIDES FILE REFERENCE: 28110/36570
                                                                                                                                                                                                                                                        NUMBER OF SEQ ID NOS:
                                                                                                                                                            LENGTH: 14747
TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                 R APPLICATION NUMBER:
R FILING DATE: 1999-07
R APPLICATION NUMBER:
R FILING DATE: 1999-03
                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: FILING DATE: 1999-
                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1936 ACCCCGTCTGTACTCAAAATGC--AAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAAT 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7682 CYGAGGYGGGTGGATCACCTGAGRTCAGRAGTTYRÁGAMYAGCCTGGCCAÁCATGGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7742 AAMCGAMCAAAAAAGCYRGGMGTGGTGGCTCAYRCCTRTAATYCYAGCACTTTGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAAAAATAATAAA 7427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAAAAAAAAAAAAA 2129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTAAGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAGACTCTGTCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCCAGCTACTTGGGAGGCTGAGGAGAATCGCTTGAACCCAGGAGGTGGAGGTTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAA 1935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTGAGCYGWGATCRYGCCAYTGCACTCCAGCCYRGGMAACAAGAGCRAGACTCCGTCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCAGCTACTYGGGAGGCTGAGGCAGRAGAATCGCTTGAACCCAGGAGGYGRAGGYTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCCCGTCTCTACTAAAAATACAAAAAATTAGCCRGGCGTGGTGGCGCRYGCCTGTAAT
                                                                                                                                                                                                                                   PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                    CATION NUMBER: PO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mulero, Julio
Yeung, George
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGAGAGGGCCGGGCGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                   1999-03-19
                                                                                                                                                                                                                                                                                                            1998-07-24
                                                                                                                                                                                                                                                                         1998-07-16
                                                                                                                                                                                                                                                                                                                                                1999-02-04
                                                                                                                                                                                                                                                                                                                                                                                                                     1999-07-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1999-08-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000-01-1
 9.4%; Score 265.6; DB 4; 79.0%; Pred. No. 4.5e-49; tive 34; Mismatches 34;
                                                                                           adenosine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PCT/US99/16180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            09/370,265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 09/557,800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                09/481,238
                                                                                                                                                                                                                                                                                                                           09/122,449
                                                                                                                                                                                                                                                                                                                                                              09/244,444
                                                                                                                                                                                                                                                                                                                                                                                                                                       09/350,836
                                                                                                                                                                                                                                                                                                                                                                                                  09/273,447
                                                                                         or guanine
                                                                                           R
                                                                                         cytosine
                                   Length 14747;
                                                                                           9
 11;
   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1875
 2
```

```
APPLICANT: Ford, John
APPLICANT: Mularo, Julio
APPLICANT: Weung, George
TITLE OF INVENTION: Methods and Materials Relating to CD39-Like
TITLE OF INVENTION: Polypeptides
FILE REFERENCE: 28110/36457
FURRENT APPLICATION NUMBER: US/09/557,800C
CURRENT FILING DATE: 2000-04-25
PRIOR APPLICATION NUMBER: 09/481,238
PRIOR FILING DATE: 2000-01-11
FRIOR APPLICATION NUMBER: 09/370,265
PRIOR APPLICATION NUMBER: 09/370,265
PRIOR APPLICATION NUMBER: PCT/US99/16180
PRIOR APPLICATION NUMBER: PCT/US99/16180
PRIOR APPLICATION NUMBER: 09/350836
PRIOR FILING DATE: 1999-07-16
PRIOR APPLICATION NUMBER: 09/350836
PRIOR APPLICATION NUMBER: 09/370447
PRIOR APPLICATION NUMBER: 09/273447
; PEATURE:
; NAME/KEY: misc feature
; LOCATION: (13641)
; OTHER INFORMATION: n = adenosine or guanine or cytosine or thymidine
US-09-557-800C-42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 15
US-09-557-800C-42/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      딹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS: 56
SOFTWARE: PatentIn Ver. 3
SEQ ID NO 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 42, Application US/09557800C Patent No. 6476211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR FILING DATE: 1999-03-19
PRIOR APPLICATION NUMBER: 09/122449
PRIOR FILING DATE: 1998-07-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 09/244444
PRIOR FILING DATE: 1999-02-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                      TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                            ENGTH: 14747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAAAAATAATAAA 10787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAMCGAMCAAAAAAGGCYRGGMGTGGTGGCTCAYRCCTRTAATYCYAGCACTTTTGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         СВАВАВАВАВАВАВА 2129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTGAGCYGWGATCRYGCCAYTGCACTCCAGCCYRGGWAACAAGAGCRAGACTCCGTCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTAAGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAGACTCTGTCTCA 2113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCCAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGAGGTGGAGGTTGCA 2053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCCCGTCTCTACTAAAAATACAAAAAATTAGCCRGGCGTGGTGGCGCRYGCCTGTAAT 10923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCCCGTCTGTACTCAAAATGC--AAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAAT 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CYGAGGYGGGTGGATCACCTGAGRTCAGRAGTTYRAGAMYAGCCTGGCCAACATGGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ccgagccgggcggarcaccigregrcaggagrirgagaccagcciggccaacarggcaaa 1935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     сса д стор стор става с пред с 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -----AGAGAGGGCCGGGCGTGGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGG 1875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-07-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   09/118,205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11043
```

Query Match Best Local Similarity

9.48;

Score 265.6; DB 4; Pred. No. 4.5e-49;

Dy Qy	A 4	40	84 84	B 8	B 8	D 29	Мал
2114 10802	2054 10862	1994 10922	1936 10982	1876 11042	1824 11102	1765 11162	Matches 29
14 GAAAAAAAAAAAA 2129 02 AAAAATAATAATAAA 10787	GTAAGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAGAGACTCTGTCTCA	CCCAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCCAGGAGGTGGAGGTTGCA	ACCCCGTCTGTACTCAAAATGCAAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAAT	CCGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAA - - - - - - - - - -		CCAGCCTGGGCAACATAACAAGATCCTGTCTCTCAAAAAAAA	297; Conservative 34; Mismatches 34; Indels 11; Gaps
	2113	2053 10863	1993 10923	1935	1875 11043	1823 11103	2;

Search completed: March 7, 2004, 11:59:47 Job time: 222 secs

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Perfect score:
                                                                                                                   7:
8:
9:
10:
11:
12:
14:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-966-880A-7
2818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     March
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2421054 seqs, 1828716029 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /cgn2_6/ptodata/1/pubpna/VCG NEW PUB.seq:*
/cgn2_6/ptodata/1/pubpna/US06 NEW PUB.seq:*
/cgn2_6/ptodata/1/pubpna/US07 NEW PUB.seq:*
/cgn2_6/ptodata/1/pubpna/US07 NEW PUB.seq:*
/cgn2_6/ptodata/1/pubpna/US07 NEW PUB.seq:*
/cgn2_6/ptodata/1/pubpna/US08 NEW PUB.seq:*
/cgn2_6/ptodata/1/pubpna/US08 NEW PUB.seq:*
/cgn2_6/ptodata/1/pubpna/US09 PUBCOMB.seq:*
/cgn2_6/ptodata/1/pubpna/US09A PUBCOMB.seq:*
/cgn2_6/ptodata/1/pubpna/US09B PUBCOMB.seq:*
/cgn2_6/ptodata/1/pubpna/US09E PUBCOMB.seq:*
/cgn2_6/ptodata/1/pubpna/US09E PUBCOMB.seq:*
/cgn2_6/ptodata/1/pubpna/US09E PUBCOMB.seq:*
/cgn2_6/ptodata/1/pubpna/US10A PUBCOMB.seq:*
/cgn2_6/ptodata/1/pubpna/US10B PUBCOMB.seq:*
/cgn2_6/ptodata/1/pubpna/US10B PUBCOMB.seq:*
/cgn2_6/ptodata/1/pubpna/US10C PUBCOMB.seq:*
/cgn2_6/ptodata/1/pubpna/US10C PUBCOMB.seq:*
/cgn2_6/ptodata/1/pubpna/US10C PUBCOMB.seq:*
/cgn2_6/ptodata/1/pubpna/US10C PUBCOMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7, 2004, 09:57:52; Search time 964 Seconds (without alignments) 10691.539 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4842108
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

_	
4	
Į	
₹	
5	
d	
á	
-	

13 281.4 10.0 14 280.2 9.9	281.4		281 4	281.4	284.4	292.6	295.2	295.2	295.2	603.4	2172	3 2174.6 77.2	2 2174.6 77.	1 2818 100.0	Result Query
9 11821	9 11821			0 65608	32249		5 13862		13862	1 2440	1 2172	11204	2 6564	2818	Length
15	9	9	9	9	10	10	14	10	10	ø	w	ø	9	9	80
US-10-242-515-2857	US-09-764-877-2857	US-09-954-531-180	US-09-962-832-119	US-09-962-436-292	US-09-764-891-7364	US-09-764-891-6094	US-10-205-428-1003	US-09-764-891-10204	US-09-764-891-5477	US-09-966-880A-1	US-09-966-880A-15	US-09-966-880A-35	US-09-966-880A-10	US-09-966-880A-7	ID
Sequence 2857, Ap	2857,	180,	119,	Sequence 292, App	7364,	Sequence 6094, Ap	Sequence 1003, Ap	Sequence 10204, A		Sequence 1, Appli	Sequence 15, Appl	35,	10	Sequence 7, Appli	Description

ი	ი	O	•)					ი								a	a	a			ი	ი	ი	ი	ი	ი	ი		
45	44	4	, ,	3	41	40	39	38	37	36	ω 5	34	ω U	32	31	30	29	28	27	26	ν 5	24	23	22	21	20	19	⊥ 8	17	16
269.8	φ	2.0.2	• (•	0	270.8		271	272	273	273	273	273.6	73	274	274	274.2			274.8		-1	275		•	•	276.6		278.2	280
9.6				'n	თ								. 7						. 7	9.8										
43950	43950	T / 286	1 1 0 0	11207	107820	1061	670	271	17491	26657	26657	2401	174424	174424	4963	4963	186739	176001	11811	15362	15362	20050	6482	3966	3966	38000	37940	300000	32204	15297
14	13) U	, (0	10	14	15	9	14	14	9	7	10	9	Ļ	9	1 6	16	10	15	9	14	14	14	9	15	15	14	10	13
US-10-339-657-3	US-10-060-332-3	US-10-242-515-3234	100	00-764-077-333	US-09-792-616-1	US-10-277-161-66	US-10-027-632-201375	\mathbf{L}	US-10-017-161-1995	US-10-395-242-3	US-09-810-673A-3	US-10-027-632-102635	US-09-960-706-969	US-09-967-768A-314	US-10-242-515-2903	US-09-764-877-2903	-10-210	US-10-210-556-27	US-09-728-552-7	US-10-242-515-2856	US-09-764-877-2856	US-10-180-410-5	US-10-180-410-6	US-10-072-349-227	US-09-764-855-227	US-10-175-627-11	US-10-348-073A-12	US-10-262-552-33	US-09-764-891-8537	US-10-003-295-3
ω `		L			Sequence 1, Appli	_	æ	13, App	1995, 2	Sequence 3, Appli	3, Appli	102	Sequence 969, App	14,	e 290		15	27	7,	e 28	285	<u>υ</u>	Sequence 6, Appli	e 22	227	11,	Sequence 12, Appl	3 3	e 8537,	Sequence 3, Appli

ALIGNMENTS

```
US-09-966-880A-7

i Sequence 7, Application US/09966880A

Sequence 7, Application US/09966880A

Sequence 7, Application US/09966880A

Patent No. US20020164743A1

GENERAL INFORMATION:

APPLICANT: HONJO, Tasuku

APPLICANT: HONJO, Tasuku

APPLICANT: MITAMATEN, MASAMICHI

TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE

FILE REFERENCE: 06501-088001

CURRENT FILING DATE: 2000-03-28

PRIOR FILING DATE: 2000-03-28

PRIOR FILING DATE: 2000-03-28

PRIOR FILING DATE: 1999-12-27

PRIOR APPLICATION NUMBER: JP 11-371382

PRIOR FILING DATE: 1999-06-24

PRIOR FILING DATE: 1999-05-29

PRIOR FILING DATE: 1999-05-29

NUMBER OF SEQ ID NOS: 36

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 7

SEATURE: NAME/KEY: CDS

LOCATION: (80)...(673)

FEATURE: NAME/KEY: 3'UTR

LOCATION: (1)...(79)

FASTURE: NAME/KEY: 3'UTR

LOCATION: (677)...(2818)

US-09-966-880A-7

Query Match

Duery Match

Local Similarity 100.0%; Score 2818; DB 9; Length 2818;

DESTINATION: (577)...(2818)
```

90 90 90 90 90 90 90	8 8 8 8	40 A0	Db dd	40 40 40	Db Qy	Q B Q	95 95 95 50 95 95	04 04 05	Matc Qy Db
901 GCAACATTGTCCCCTACTGGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGT 960	781 FFTCTTAGAGTTTACAGAAATATTATATAGACACTCTTTAAAAAGATCTATGTCTTG 840	TACTITIGGACTITGATAGCAACTTCCAGGAATGTCACACGATGAAAATCTCTGCTG 7	01 A 01 A	481 GCAAATAGCCATCATGACCTTCAAAGATTATTTTTACTGCTGGAATACTTTTGTAGAAAA 540		01 CTGCTACCGCGTCACCTGGTTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGT 36	181 GAGGGGGACAGTGCTACATCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGG 240	61 AGACACTCTGGACACCACTATGGACAGCCTCTTGATGAACCGGAGGAGGAGTTTCTTTACCA 120	Matches 2818; Conservative 0; Mismatches 0; Indels 0; Gaps 0; 1 AGAGAACCATCATTAATTGAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGGGAGGGCAAGA 60
20 DD C4	40 AG AG	8 8 8 B	S B S 8	3	20 DB 02 DB	Q	B & B &	5 B & B &	5 8 8
1981 AGGCACCTGTAATCCCAGCTACTIGGGAGGCTGAGGCAGAGAATCGCTTGAACCCAGGA 2040 1981 AGGCACCTGTAATCCCAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGA 2040 2041 GGTGGAGGTTGCAGTAAGCTGAGATCGTGCGCTGCACCTCCAGGCTGGGCGACAAGAGCA 2100	CAGCACTTTGGGAAGACCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGGCGAACATTGGAACACTGTGGTAAAATTGCAAAAATTAGCCAGGCGTGTAGTACTCAAAATTGCAAAAATTAGCCAGGCGTGGTAGCCAACATTGGCAAAAATGCAAAAATTAGCCAAGACTGGTAGTAGCCAGGCTTGTTACTCAAAAATGCAAAAATTTAGCCAGGCGTGGTAGCCGGTCTGTTACTCAAAAATGCAAAAATTTAGCCAGGCGTGGTAGCGGCGCGTCTGTACTCAAAAATGCAAAAATTTAGCCAGGCGTGGTAGCAGAAAATGCAAAAATTGAAAAATTAGCCAGGCGTGGTAGCAGAAAATGCAAAAATTAGCCAGGCGTGGTAGCAGAAAATGCAAAAATTAGCCAGGCGTGGTAGCAGAAAATGCAAAAATTAGCCAGGCGTGGTAGCAAAATGCAAAAATGCAAAAATGCAAAAATGCAAAAATGCAAAAATGCAAAAATGCAAAAATGCAAAAATGCAAAAATGCAAAAATGCAAAAATGCAAAAATGCAAAAATGCAAAAATGCAAAAATGCAAAAATGCAAAAATGCAAAAATGCAAAAATGCAAAAATGCAAAAATGCAAAAATGCAAAAATGCAAAAATGCAAAAATGCAAAAATGCAAAAATGCAAAAATGCAAAAATGCAAAAATGCAAAAATGCAAAAATGCAAAAAATGCAAAAAATGCAAAAAATGCAAAAAATGCAAAAAATGCAAAAAATGCAAAAAATGCAAAAAATGCAAAAATGCAAAAATGCAAAAAATGCAAAAAAATGCAAAAAATGCAAAAAATGCAAAAAATGCAAAAAATGCAAAAAAATGCAAAAAATGCAAAAAAATGCAAAAAATGCAAAAAAATGCAAAAAAATGCAAAAAATGCAAAAAAAA	1741 TGGCTTGAACACAGGTGTTCAAGGCCAGCCTGGGCAACATAACAAGATCCTGTCTCTCAA 1800 1801 AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	681 AGCTGCGAACCGTGGCACACGCTCATAGTTCTAGCTGCTTGGGAGGGTTGAGGAGGGAG	1561 GGGTCTCTCATCTCAGAATGCCAATCAGGTTTAGCTACATTTTGTATGTGTGT 1620 1561 GGGTCTCTCATCTCAGAAATGCCAATCAGGTTTAGCTACATTTTGTATGTGTGT 1620 1621 GATGCTTCTCCCCAAAGGTATATTAACTATTATAGAGAGTTTGTGACAAAACAGAATGATAA 1680	AÀACTCTTTTAAGGÀAGTCCCTÀATTTAGAÀACACCACAAÀCTTCACATATCATAATTA GCAAACAATTGAAGGAAGTTGCTTGATGTTGGGGAAAACTTCACTATTGGCTCTCGT GCAAACAATTGGAAGGAAGTTGCTTGAATGTTGGGGAAAAAATCTATTGGCTCTCGT	1381 TGTGAACAAGACACCCTAATAATGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAACGC 1440	CAGAAGCATGTTTTTATGTTTGTACAAAAGAAGATTGTTATGGTGGGGATGAAGAAGAAGAAGAA	AAACTCTTCCATCAGGCCATGATCTTAATAGGACCTCCTAATGAGAGTATCTGGGTGATTGT GACCCCAAAACCATCTCTCCCAAAGCATTAATATCCAATCATGAGCTGTATGTTTTAATCAG GACCCCAAAACCATCTCTCCCAAAGCCATTAATATCCCAATCATGCGCTGTATGTTTTAATCAG GACCCCAAAACCATCTCTCCCAAAGCATTAATATCCAATCATGCGCTGTATGTTTTAATCAG GACCCCAAACCATCTTTTTATCTTTACAATCATAATATCCAATCATGCGCTGTATGTTTTTAATCAG	1081 AGTGGTGTTAGTGATAGATTTTTCTATTCTTTTCCCTTGACGTTTACTTTCAAGTAACAC 1140

밁

Ś

밁 S 밁 8

밁 S

0,

Gaps

3794 676 0

```
APPLICANT: HONJO, TASUKU
APPLICANT: MUTAMATEN, MASAMICHI
APPLICANT: MUTAMATEN, MASAMICHI
TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
FILE REPERENCE: 06501-088001
CURRENT APPLICATION NUMBER: US/09/966,880A
CURRENT FILING DATE: 2001-09-28
PRIOR APPLICATION NUMBER: PCT/JP00/01918
PRIOR FILING DATE: 1909-12-27
PRIOR APPLICATION NUMBER: JP 11-371382
PRIOR APPLICATION NUMBER: JP 11-178999
PRIOR FILING DATE: 1999-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 2
US-09-966-880A-10
                                                                              NUMBER OF SEQ ID NOS: 36
SOFTWARE: FASTSEQ for Windows Version
SEQ ID NO 10
LENGTH: 6564
TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 10, Application U Patent No. US20020164743A1 GENERAL INFORMATION:
       Query Match
                                            ORGANISM: Homo
-09-966-880A-10
                                                                                                                                                                        PRIOR APPLICATION NUMBER: JP 11-87192
PRIOR FILING DATE: 1999-03-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCCAATAAGGGATCCCTATTTGTCTCTTTTGGTGTGTTATTTTGTCCCTAACAACTGTCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGAGÀGAAGGATGGGGAAGCATTGCAAGGAAATTGTGCTTTATCCAACAAAATGTAAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTTGGAAGCTGTGAAGATAAAATACCAAATAAAATAATAATAAAAGTGATTTATATGAAGT 2760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GACAGTGAGAAAAATATTCAGAATAACCATATCCCTGTGCCGTTATTACCTAGCAACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACAGTGAGAAAAATATTCAGAATAACCATATCCCTGTGCCGTTATTACCTAGCAACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCCAATAAGGGATCCCTATTTGTCTCTTTTTGGTGTCTATTTGTCCCTAACAACTGTCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGAGAGAAGGATGGGAAGCATTGCAAGGAAATTGTGCTTTATCCAACAAATGTAAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTTGGAAGCTGTGAAGATAAAATACCAAATAAAATAATATATAAAAGTGATTTATATGAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTAATTGTAACATTGCAGTAATGGTGCTACGAAGCCATTTCTCTTGATTTTTAGTAAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTAATTGTAACATTGCAGTAATGGTGCTACGAAGCCATTTCTCTTGATTTTTAGTAAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AATGGAGTCTCAAAGCTTCATAAATTTATAACTTTAGAAATGATTCTAATAACAACGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AATGGAGTCTCAAAGCTTCATAAATTTATAACTTTAGAAATGATTCTAATAACAACGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTATATTATTTTGCGTCTAATGATTTTTATTAACATGATTTCCTTTTCTGATATATTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTATATTATTTTGCGTCTAATGATTTTTTATTAACATGATTTCCTTTTCTGATATATTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTATTGTACATAAGTTTGTAAAAGAGTTAAAAATTGTTACTTCATGTATTCATTTATATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGCAATGAAGATGAGCAGATCCACAGGAAAACTTGAATGCACAACTGTCTTATTTTAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTATTGTACATAAGTTTGTAAAAGAGTTAAAATTGTTACTTCATGTATTCATTTATATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ТССААТСААСАТСАССАСАССАСАСВААААСТТСААТССАСААСТСТСТТАТТТААТС
                                                             sapiens
       77.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US/09966880A
         Score
         2174.
       9
       B
     9
     Length
       6564;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2220
                     S
                                                           B
                                                                                          Ś
                                                                                                                                밁
                                                                                                                                                               ş
                                                                                                                                                                                                         문
                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity Matches 2177; Conserv
                       1637
                                                           4695
                                                                                              1577
                                                                                                                                    4635
                                                                                                                                                                       1517
                                                                                                                                                                                                           4575
                                                                                                                                                                                                                                              1457
                                                                                                                                                                                                                                                                                    4515
                                                                                                                                                                                                                                                                                                                     1397
                                                                                                                                                                                                                                                                                                                                                             4455
                                                                                                                                                                                                                                                                                                                                                                                               1337
                                                                                                                                                                                                                                                                                                                                                                                                                                    4395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3735 CTACAGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         617
GTATATTAACTATATAAGAGAGTTGTGACAAAACAGAATGATAAAGCTGCGAACCGTGGC
                                                           AAGTTGCTTGAATGTTGGGGAGAGAGGAAAATCTATTGGCTCTCGTGGGTCTCTTCATCTCA
                                                                                                                                                                                                         GTCCCTAATTTAGAAACACCCCACAAACTTCACATATCATAATTAGCAAACAATTGGAAGG
                                                                                                                                                                                                                                              GTCCCTAATTTAGAAACACCCCACAAACTTCACATATCATAATTAGCAAACAATTGGAAGG
                                                                                                                                                                                                                                                                                TAATAATGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAACGCAAACTCTTTTAAGGAA
                                                                                                                                                                                                                                                                                                                                                                                        CTTCAAGCTACTTTAATAAGGATCTTAAAATGGGCAGGAGGACTGTGAACAAGACACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCATGATCTATAGGACCTCCTAATGAGAGTATCTGGGGTGATTGTGACCCCCAAACCATCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GATTTTTCTATTCCCTTTGACGTTTACTTTCAAGTAACACAAAACTCTTCCATCAGG
                                                                                                                                  AAGTTGCTTGAATGTTGGGGAGAGGAAAATCTATTGGCTCTCGTGGGTCT
                                                                                                                                                                                                                                                                                                                     TAATAATGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAACGCAAACTCTTTTAAGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCAAAGCATTAATATCCAATCATGCGCTGTATGTTTTAATCAGCAGAAGCATGTTTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GATTTTTCTATTCTTTTCCCTTGACGTTACTTTCAAGTAACACAAACTCTTCCATCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTTTTATATCAACATCCTTTATTATTTGATTCATTTGAGTTAACAGTGGTGTTAGTGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTTTTAGGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCATGGTGAGAGAGCATCAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCAACGTTTTTCTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCAACGTTTTTCTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACAGGTCTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGCAACATTGTCCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAAAAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAAAATAGAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAAAAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAAAATAGAGAAGGGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AACAGTCCTTCAAGTCTTCTCTGTTTTTATTCTTCAACTCTCACTTTCTTAGAGTTTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AACAGTCCTTCAAGTCTTCTCTGTTTTTATTCTTCAACTCTCACTTTCTTAGAGTTTTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTTTTGCCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTGA
                                                                                                                                                                                                                                                                                                                                                           CTTCAAGCTACTTTAATAAAGGATCTTAAAATGGGCAGGAGGACTGTGAACAAGACACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCCAAAGCATTAATATCCAATCATGCGCTGTATGTTTTAATCAGCAGAAGCATGTTTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCATGATCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTGACCCCAAACCATCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTTTTATATCAACATCCTTTATTATTTGATTCATTTGAGTTAACAGTGGTGTTAGTGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTTTTAGGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCATGGTGAGAGGATCAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACAGGTCTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGCAACATTGTCCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
```

1576

4634 1516

1696 4754 1636 4694 1456

4574

1396 4454 1336

4514

1276 4334 1216

4394

1156 4214 1096 4154

4274

4094

1036

4034

916

976

3974

3914

796 3854

밁

5 밁 δ 밁 8 밁 5 밁 Ś

g S

밁 S

```
ATAAAATACCAAATAAAATATATAAAAGTGATTTATATGAAGTTAAAATAAAAATCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATTTGTCTCTTTTGGTGTCTATTTGTCCCTAACCACTGTCTTTGACAGTGAGAAAATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAGCATTGCAAGGAAATTGTGCTTTTATCCAACAAAATGTAAGGAGCCAATAAGGGATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAGAAAGAGAGAGGCCGGGCGTGGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAGAAAGAGAGAGAGGGCCGGGCGTGGTGGCTCACGCCTGTAATCCCAGCACTTTTGGGAGGC 1876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTATATTAACTATATAAGAGAGTTGTGACAAAACAGAATGATAAAGCTGCGAACCGTGGC
ATAAAATACCAAATAAAATAATATAAAAGTGATTTATATGAAGTTAAAATAAAAATCAG
                                                                                                  AGTAATGGTGCTACGAAGCCATTTCTCTTTGATTTTTAGTAAACTTTTATGACAGCAAATT
                                                                                                                                                                                                                                                             TTCATAAATTTATAACTTTAGAAATGATTCTAATAACAACGTAJGTAATTGTAACATTGC
                                                                                                                                                                                                                                                                                                                                       CTAATGATTTTTTAATTAACATGATTTCCTTTTCTGATATATTTGAAATGGAGTCTCAAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGATCCACAGGAAAACTTGAATGCACAACTGTCTTATTTTAATCTTATTGTACATAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTCAGAATAACCATATCCCTGTGCCGTTATTACCTAGCAACCCTTGCAATGAAGATGAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAGACTCTGTCTCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCCAGGAGGTGGAGGTTGCAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCCCGTCTGTACTCAAAATGCAAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAATCCC 5114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCCCGTCTGTACTCAAAATGCAAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAAA
                                                                                                                                                         AGTAATGGTGCTACGAAGCCATTTCTCTTGATTTTTAGTAAACTTTTATGACAGCAAATT
                                                                                                                                                                                                                                    TTCATAAATTTATAACTTTAGAAATGATTCTAATAACAACGTATGTAATTGTAACATTGC
                                                                                                                                                                                                                                                                                                                  CTAATGATTTTTATTAACATGATTTCCTTTTCTGATATATTGAAATGGAGTCTCAAAGC
                                                                                                                                                                                                                                                                                                                                                                                              TGTAAAAGAGTTAAAAATTGTTACTTCATGTATTCATTTATATTTTATATTTTTGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                 TGTAAAAGAGTTAAAAATTGTTACTTCATGTATTCATTTATATTTTATATTTTGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGATCCACAGGAAAACTTGAATGCACAACTGTCTTATTTAATCTTATTGTACATAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTCAGAATAACCATATCCCTGTGCCGTTATTACCTAGCAACCCTTGCAATGAAGATGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATTTGTCTCTTTTGGTGTCTATTTGTCCCTAACAACTGTCTTTGACAGTGAGAAAAATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAGCATTGCAAGGAAATTGTGCTTTATCCAACAAAATGTAAGGAGCCAATAAGGGATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAAAAAAAAAAAAGAGAGAGAGAGAAAGAGAACAATATTTGGGAGAGAAGGATGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAGACTCTGTCTCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCTACTTGGGAGGCTGAGGCAGGAGATCGCTTGAACCCAGGAGGTGGAGGTTGCAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . 5174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . 1936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4874
                                                                                                                                                                                                                                                                                                                                                       2536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4814
                                    2776
                                                                           5834
                                                                                                                2716
                                                                                                                                                       5774
                                                                                                                                                                                              2656
                                                                                                                                                                                                                                    5714
                                                                                                                                                                                                                                                                         2596
                                                                                                                                                                                                                                                                                                                5654
                                                                                                                                                                                                                                                                                                                                                                                              5594
                                                                                                                                                                                                                                                                                                                                                                                                                                 2476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:

APPLICANT: HODJO, TASUKU
APPLICANT: MUXAMATION:

TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
FILE REFERENCE: 06501-088001
CURRENT APPLICATION NUMBER: US/09/966,880A
CURRENT FILING DATE: 2001-09-28
PRIOR APPLICATION NUMBER: PCT/JP00/01918
PRIOR APPLICATION NUMBER: PCT/JP00/01918
PRIOR FILING DATE: 1999-12-27
PRIOR FILING DATE: 1999-12-27
PRIOR FILING DATE: 1999-12-27
PRIOR FILING DATE: 1999-13-171382
PRIOR APPLICATION NUMBER: JP 11-178999
PRIOR APPLICATION NUMBER: JP 11-17899
PRIOR APPLICATION NUMBER: JP 11-87192
PRIOR APPLICATION NUMBER: JP 11-87192
PRIOR FILING DATE: 1999-03-29
NUMBER OF SEQ ID NOS: 36
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; LENGTH: 11204
; TYPE: DNA
; ORGANISM: Homo :
US-09-966-880A-35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                 5
                                                                                              밁
                                                                                                                          S
                                                                                                                                                                         밁
                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                  片
                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              묽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 3
US-09-966-880A-35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                片
                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 2177; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 35, Application Patent No. US200201647431
                  9430
                                                       1097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2777
                                                                                              9370
                                                                                                                                  1037
                                                                                                                                                                           9310
                                                                                                                                                                                                                                                       9250
                                                                                                                                                                                                                                                                                                                                                                                                                9130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9010 TAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAAA
                                                                                                                                                                                                                977
                                                                                                                                                                                                                                                                                            917
                                                                                                                                                                                                                                                                                                                                                                         857
                                                                                                                                                                                                                                                                                                                                                                                                                                                       797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TATGATGGAATAAACTTGAAA
                                        GATTTTTCTATTCTTTTCCCTTGACGTTTACTTTCAAGTAACACAAACTCTTTCCATCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                           GAAAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAAAATAGAGAAGGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AACAGTCCTTCAAGTCTTCTCTGTTTTTATTCTTCAACTCTCACTTTCTTAGAGTTTTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTACAGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTTTTGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTTGA
                  GATTTTTCTATTCTTTTCCCTTGACGTTTACTTTCAAGTAACACAAACTCTTCCATCAGG
                                                                                                                                                                                                                                                                                 CTGGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCAACGTTTTTCTATGA
                                                                                                                                                                                                                                                                                                                                     ACAGGTCTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGCAACATTGTCCCCTA
                                                                                                                                                                                                                                                                                                                                                           ACAGGTCTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGCAACATTGTCCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                GAAAAATATTTATATACGACTCTTTAAAAAAGATCTATGTCTTGAAAATAGAGAAGGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AACAGTCCTTCAAGTCTTCTCTGTTTTTATTCTTCAACTCTCACTTTCTTAGAGTTTACA
                                                                                              TTTTTATATCAACATCCTTTATTATTTGATTCATTTGAGTTAACAGTGGTGTTAGTGATA
                                                                                                                                  TTTTTATATCAACATCCTTTATTATTTGATTCATTTGAGTTAACAGTGGTGTTAGTGATA
                                                                                                                                                                         CTTTTAGGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCATGGTGAGAGGATCAAATG
                                                                                                                                                                                                              CTTTTAGGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCATGGTGAGAGGATCAAATG
                                                                                                                                                                                                                                                         CTGGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCAACGTTTTTCTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0164743A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     77.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US/09966880A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 2174.6;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                              . 976
                  9489
                                                         1156
                                                                                                                                    1096
                                                                                                                                                                                                                1036
                                                                                                                                                                                                                                                                                                                                                                           916
                                                                                                                                                                                                                                                                                                                                                                                                                                                       856
                                                                                                9429
                                                                                                                                                                           9369
                                                                                                                                                                                                                                                         9309
                                                                                                                                                                                                                                                                                                                                     9249
                                                                                                                                                                                                                                                                                                                                                                                                                  9189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   o
```

8 밁 Ó 뮍 Ś В Ś 밁 Ş 밁 Ś 밁 δ 밁 Ś 밁 8 ద S B S 8

2297

5355

2237

5235 2177 5295 5175

2057

2117

5115

5055

1937

1997

4995

1877

4755 1697 4815 1757 1757 4875 1817

밁

5415

5475

2357

8 8 8 8 8 8 8 8 8 8 8 8 8 8

2717 5835 5715

2597

2657

5655

2537

5595

2477

5535

2417

밁

5

경 음 경

유

	2296	acagtgagaaaa	
	2236 10569	2177 AAGCATTGCAAGGAAATTGTGCTTTATCCAACAAATGTAAGGAGCCAATAAGGGATCCC	
	2176 10509	2117 AAAAAAAAAAAAAAAAGAGAGAGAGAGAGAAAGAGAACAATATTTGGGAGAGAAGGATGGGG	• •
	2116 10449	2057 AGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAGACTCTGTCTCAGAA	•
	2056 10389	1997 AGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGAGGTGGAGGTTGCAGTA 	
	1996 10329	1937 CCCCGTCTGTACTCAAAATGCAAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAATCCC	
	1936 10269	1877 CGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAAA	
	1876 10209	1817 AAGAAAGAGAGAGGGCCGGGCGTGGTGGTGCTCACGCCTGTAATCCCCAGCACTTTGGGAGGC	
	1816 10149	1757 GTTCAAGGCCAGCCTGGGCAACATAACAAGATCCTGTCTCTCAAAAAAAA	
	1756 10089	1697 ACACGCTCATAGTTCTAGCTGCTTGGGAGGTTGAGGAGGGAG	
	1696 10029	1637 GTATATTAACTATATAAGAGAGTTGTGACAAAACAGAATGATAAAGCTGCGAACCGTGGC	
	1636 9969	1577 GAAATGCCAATCAGGTCAAGGTTTGCTACATTTTGTATGTGTGTG	
	1576 ·	1517 AAGTTGCTTGAATGTTGGGGAGAGGAAAATCTATTGGCTCTCGTGGGTCTCTTCATCTCA	
	1516 9849	1457 GTCCCTAATTTAGAAACACCCACAAACTTCACATATCATAATTAGCAAACAATTGGAAGG 	
	1456 9789	1397 TAATAATGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAACGCAAACTCTTTTAAGGAA	
·	1396 9729	1337 CTTCAAGCTACTTTAATAAAGGATCTTAAAATGGGCAGGAGGACTGTGAACAAGACACCC	
	1336 9669	1277 TGTTTGTACAAAAGAAGATTGTTATGGGTGGGGATGGAGGTATAGACCATGCATG	
· · · · · · · · · · · · · · · · · · ·	1276 9609	1217 TCCAAAGCATTAATATCCAATCATGCGCTGTATGTTTTAATCAGCAGAAGCATGTTTTTA	
,	1216 9549	1157 CCATGATCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTGACCCCAAACCATCTC	

```
10930
                                                                                                                                                                                                                                                                                                                                                                                                  10750
 11110
                                                                                                                                 10990
                                                                                                                                                                                                                                                                  10870
                                                                                                                                                                                                                                                                                                                                  10810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10570
                                                                                                                                                                                                                                                                                                                                                                2477
                                                                                                                                                                 2657
                                                                                                                                                                                                                                                                                                                                                                                                                                2417
                                                                                                                                                                                                                                  2597
                                                                                                                                                                                                                                                                                                  2537
TATGATGGAATAAACTTGAGA 11130
                    TATGATGGAATAAACTTGAAA 2797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATAAAATACCAAATAAAATAATAATAAAAGTGATTTATATGAAGTTAAAAATAAAAATCAG
                                                                                                                                                    AGTAATGGTGCTACGAAGCCATTTCTCTTTGATTTTTAGTAAACTTTTTATGACAGCAAATT
                                                                                                                                                                                                                                                                                        TTCATAAATTTATAACTTTAGAAATGATTCTAATAACAACGTATGTAATTGTAACATTGC
                                                                                                                                                                                                                                                                                                                                                    AGATCCACAGGAAAACTTGAATGCACAACTGTCTTATTTTAATCTTATTGTACATAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTCAGAATAACCATATCCCTGTGCCGTTATTACCTAGCAACCCTTGCAATGAAGATGAGC
                                                                                                                                 AGTAATGGTGCTACGAAGCCATTTCTCTTGATTTTTAGTAAACTTTTATGACAGCAAATT
                                                                                                                                                                                                                                                                  TTCATAAATTTATAACTTTAGAAATGATTCTÄATAACAACGTATGTAATTGTAACATTGC
                                                                                                                                                                                                                                                                                                                                  CTAATGATTTTTTATTAACATGATTTCCTTTTCTGATATATTGAAATGGAGTCTCAAAGC
                                                                                                                                                                                                                                                                                                                                                                                                  TGTAAAAGAGTTAAAAATTGTTACTTCATGTATTCATTTTATATTTTTATATTTTTGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                    TGTAAAAGAGTTAAAAATTGTTACTTCATGTATTCATTTATATTTTATATTTTTGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGATCCACAGGAAAACTTGAATGCACAACTGTCTTATTTTAATCTTATTGTACATAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTCAGAATAACCATATCCCTGTGCCGTTATTACCTAGCAACCCTTGCAATGAAGATGAGC
                                                                                                 2776
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2356
                                                                   11109
                                                                                                                                 11049
                                                                                                                                                                 2716
                                                                                                                                                                                                  10989
                                                                                                                                                                                                                                  2656
                                                                                                                                                                                                                                                                  10929
                                                                                                                                                                                                                                                                                                  2596
                                                                                                                                                                                                                                                                                                                                  10869
                                                                                                                                                                                                                                                                                                                                                                  2536
                                                                                                                                                                                                                                                                                                                                                                                                                                  2476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10689
                                                                                                                                                                                                                                                                                                                                                                                                  10809
```

```
WESULT 4
US-09-966-880A-15
Sequence 15, Application US/09966880A
Sequence 15, Application US/09966880A
Patent NO. US20020164743A1
GENERAL INFORMATION:
APPLICANT: HOLO, Tasuku
APPLICANT: HOLO, Tasuku
APPLICANT: HOLO, Tasuku
CURRENT APPLICATION: NOVEL CCTIDINE DEAMINASE
FILE REFERENCE: 06501-088001
CURRENT FILING DATE: 2001-09-28
PRIOR APPLICATION NUMBER: US/09/966,880A
CURRENT FILING DATE: 2000-03-28
PRIOR FILING DATE: 1999-12-27
PRIOR APPLICATION NUMBER: JP 11-371382
PRIOR APPLICATION NUMBER: JP 11-371382
PRIOR FILING DATE: 1999-12-27
PRIOR FILING DATE: 1999-12-27
PRIOR PRIOR DATE: 1999-12-27
PRIOR PRIOR DATE: 1999-03-29
PRIOR PRIOR DATE: 1999-03-29
PRIOR APPLICATION NUMBER: JP 11-87192
PRIOR PRIOR DATE: 1999-03-29
NUMBER OF SEQ ID NOS: 36
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 15
LENGTH: 2172
TYPE: DNA
ORGANISM: Homo sapiens
```

682

유 성

S

8

음 성 음

g

S

음 & 음

S 밁 8 B Ś 밁 S 문 8 片 Ś 밁 Ś 밁 Ś 밁 8 뫄 Ś

r B	β	유 성	dg	γŞ	B &	? B	\$	B &	, B	8	db Qy	ф	γŞ	B &	Д	Qγ	ß &	망	Ą	4d VQ	Дb	ş	p Q	₽ 2	? {	g 29	Б
1081 TCATAGTTCTAGCTGCTTGGGAGGTTGAGGAGGAGGATGGCTTGAACACAGGTGTTCAA 1140	1703 TCATAGTTCTAGCTGGGTTGGGAGGTTGAGGAGGAGGATGGCTTGAACACAGGTGTTCAA 1762	1643 TAACTATATAAGAGACTTGTGACAAAACAGAATGATAAAGCTGCGAACCGCTGGCACACGC 1702	1 CCAATCAGGTCAAGGTTTGCTACATTTTGTATGTGTGTGT	1583 CCAATCAGGTCAAGGTTTGCTACATTTTGTATGTGTGTGT	960 CTTGAATGTTGGGGAAAAATCTATTGGCTCTCGTGGGTCTCATCTCAGAAATG 960	841 AATTTAGAAACACCCACAAACTTCACATATCATAATTAGCAAACAATTGGAAGGAA	63 AATTTAGAAACACCCACAAACTTCACATATCATTAGCAAACAATTGGAAGGAA	1403 TGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAACGCAAACTCTTTTAAGGAAGTCCCT 1462 	721 GCTACTTTAATAAAGGATCTTAAAATGGGCAGGAGGACTGTGAACAAGACACCCTTAATAA 78	1343 GCTACTTTAATAAAGGATCTTAAAATGGGCAGGAGGACTGTGAACAAGACACCCCTAATAA 1402	1283 TACAAAAGAAGATTGTTATGGGTGGGGATGGAGGTATAGACCATGCATG	601 GCATTAATATCCAATCATGCGCTGTATGTTTTAATCAGCAGAAGCATGTTTTTATGTTTG 660	1223 GCATTAATATCCAATCATGCGCTGTATGTTTTAATCAGCAGAAGCATGTTTTTATGTTTG 1282	1163 TCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTGACCCCAAACCATCTCTCCAAA 1222	81 TCTATTCTTTTCCCTTGACGTTTACTTTCAAGTAACACAAACTCTTCCATCAGGCCATGA 540	1103 TCTATTCTTTTCCCTTGACGTTTACTTTCAAGTAACACAAACTCTTCCATCAGGCCATGA 1162	1043 TATCAACATCCTTTATTATTTGATTCATTTGAGTTAACAGTGGTGTTTAGTGATAGATTTT 1102	1 GGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCATGGTGAGAGGATCAAATGTTTTTA	983 GGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCCATGGTGAGAGGATCAAATGTTTTTA 1042	923 ATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCAACGTTTTTCTATGACTTTTA 982	241 CTGGCCAGGGACGTGCAATTGGTGCAGTTTTGAATGCAACATTGTCCCCTACTGGGA 300	863 CTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGCAACATTGTCCCCTACTGGGA 922	803 ATAITTATATACGACTCTTTAAAAAGATCTATGTCTTGAAAATAGAGAAGGAACACAGGT 862	121 CCTTCAAGTCTTCTCTGTTTTTATTCTTCAACTCTCACTTTCTTAGAGTTTACAGAAAAA 180	ヾヾヾヾヾ でん でん にんしゅうしん プレー・エー・ファン・ファン・ファン・ファン・ファン・ファン・ファン・ファン・ファン・ファン	683 CTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAAAAAACAGT 742	1 CCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTGATAGCAA 60
																	- 1,00 F. 2. W						_				
d	. Q	뫄	Q	F 19	υb	श्	당 성	g Db	Q	B 8	Db	§ §	₹ &	DЬ	Q I	용 성	Db	Q .	용 성	Db :	& B	. <i>§</i>	р Г	S B	ફ	D .5	\$
2161 GGAATAAACTTG 2172	83 GGAATAAACTTG		ТАССАЛАТАЛАЛАТАТАТАРАЛАGTGATTTATATGAAGTTAAAATAAAAATCAGTATGAT	263 TGGCTCACTTTCAATCAGTTAAATAAATTAATTAATTTTTGGAAGCTGTGAAGATAAAA 2/22	81 GGTGCTACGAAGCCATTTCTCTTGATTTTTAGTAAACTTTTATGACAGCAAATTTGCTTC	2603 GGTGCTACGAAGCCATTTCTCTTGATTTTTAGTAAACTTTTATGACAGCAAATTTGCTTC 2662	2943 ARTITATIANCITTAGAAATGATTCTAATAACAACGTATGTAATTGTAACATTGCAGTAAT 1980	61 ATTTTTATTAACATGATTTCCTTTTCTGATATATTGAAATGGAGTCTCAAAGCTTCATA	83 ATTTTTTATTAACATGATTTCCTTTTCTGATATATTGAAATGGAGTCTCAAAGCTTCATA	2423 AGAGTIAAAAATIGTIACTICATGTATTCATTTTATATTTTTTTTTT	41 ACAGGAAAACTTGAATGCACAACTGTCTTATTTAATCTTATTGTACATAAGTTTGTAAA	63 ACAGGAAAACTTGAATGCACAACTGTCTTATTTTAATCTTATTGTACATAAGTTTGTAAA	2303 ATRACCATATCCCTGTGCCGTTATTACCTAGCAACCTTGCAATGAAGATGAGCAGATCC 2362	21 TCTCTTTTGGTGTCTATTTGTCCCTAACAACTGTCTTTGACAGTGAGAAAAATATTCAGA	43 TCTCTTTTGGTGTCTATTTGTCCCTAACAACTGTCTTTGACAGTGAGAAAAATATTCAGA	2183 TGCAAGAAATTGTGCTTTATCCAACAAATGTAAGGAGCCAATAAGGGATCCCTATTTG 2242	01 AAAAAAAGAGAGAGAGAAGAGAACAATATTTGGGAGAGAAGGATGGGGAAGCAT	23 дараладададададададададададададататттоодадададдатооддададсат	203 GATCGTGCCGTTGCACTCGAGCCTGGGCACAAGACCTCTGTCTCGAAAAAAAA		1321 CTGTACTCAAAATGCAAAAATTAGCCAGGGGTGGTAGCAGGCAG	43 CTGTACTCAAAATGCAAAAATTAGCCAGGCGTGGTAGGCAGGC	61 GGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAAAACCCCGT	1201 GAGAGAGGCCGGGCGTGGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGAGCCGAGCC 1260	1823 GAGAGAGGGCCGGGGCTGGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCCGAGCC 1882	41 GGCCAGCCTGGGCAACATAACAAGATCCTGTCTCAAAAAAAA	1763 GGCCAGCCTGGGCAACATAACAAGATCCTGTCTGTCTAAAAAAAA

```
PRIOR APPLICATION NUMBER: PCT/JP00/01918
PRIOR FILING DATE: 2000-03-28
PRIOR FILING DATE: 1999-12-27
PRIOR FILING DATE: 1999-12-27
PRIOR APPLICATION NUMBER: JP 11-371382
PRIOR APPLICATION NUMBER: JP 11-178999
PRIOR APPLICATION NUMBER: JP 11-87192
PRIOR APPLICATION NUMBER: JP 11-87192
PRIOR APPLICATION NUMBER: JP 11-87192
PRIOR FILING DATE: 1999-03-29
NUMBER OF SEG ID NOS: 36
SOFTWARE: FRSTSEQ for Windows Version 4.0
SEQ ID NO 1
SEQ ID NO 1
PRIOR 12440
 밁
                                                                                           Ś
                                                                                                                                 맑
                                                                                                                                                             Ś
                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                  Ś
                             S
                                                                 밁
                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 5
US-09-966-880A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 1, Application US/09966880A
Patent No. US20020164743A1
GENERAL INFORMATION:
APPLICANT: Honjo, Tasuku
APPLICANT: Muramatsu, Masamichi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:

NAME/KEY: misc_feature

LOCATION: (1)...(2440)

OTHER INFORMATION: n = A,T,C

3-09-966-880A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 1006;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/09/966,880A CURRENT FILING DATE: 2001-09-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: CDS
LOCATION: (93)...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
ORGANISM: Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: 3'UTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: 5'UTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OCATION: (690) ... (2440)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OCATION: (1)...(92)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ICANT: Muramatsu, Masamichi
E OF INVENTION: NOVEL CYTIDINE DEAMINASE
REFERENCE: 06501-088001
 376
                                363
                                                                 316
                                                                                                303
                                                                                                                                   256
                                                                                                                                                                  243
                                                                                                                                                                                                   196
                                                                                                                                                                                                                                    183
                                                                                                                                                                                                                                                                                                                                                                     63
                                                                                                                                                                                                                                                                                                                                                                                                      16
                                                                                                                                                                                                                                                                                                                                      76
                                                                                                                                                                                                                                                                                                                                                                                                                                     4
                                                                                                                                                                                                                                                                                                                                                                                                                                GAACCATCATTAATTGAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGGAGGCAAG-AAG
CTGAGTTTCTGAGATGGAACCCTAACCTCAGCCTGAGGATTTTCACCGCGCGCCTCTACT
                                                                                                                                                                                                                                                                                       ACACTCTGGACACCACTATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAAT
                             GCCACGTGGAATTGCTCTTCCTCCGCTACATCTCGGACTGGGACCTAGACCCTGGCCGCT
                                                                                                                                                                                               GGAGAGATAGTGCCACCTCCTGCTCACTGGACTTCGGCCACCTTCGCAACAAGTCTGGCT
                                                                                                                                                                                                                                  GGCGTGACAGTGCTACATCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGGCT
                                                                                                                                                                                                                                                                                                                                   TCACGCTGGAGACCGATATGGACAGCCTTCTGATGAAGCAAAAGAAGTTTCTTTACCATT
                                                                                                                                                                                                                                                                                                                                                                                                    GAAGCAGCCTTGCTTGAAGCAAGCTTCCTTTGGCCTAAGACTTTGAGGGAGTCAAGAAAG
                                                               GTTACCGCGTCACCTGGTTCACCTCCTGGAGCCCCGTGCTATGACTGTGCCCCGGCACGTGG
                                                                                             GCTACCGCGTCACCTGGTTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (686)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2001-09-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 603.4; DB 9;
Pred. No. 4e-118;
0; Mismatches 351;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         မ္ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2440;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      92;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                               362
                                                                                                                                                                                                                                                                                                  . 182
                                                                                                                                                                                                                                                                                                                                                                    122
                               422
                                                                                                                                                                302
                                                                                                                                                                                                                                242
                                                                                                                                                                                                                                                                 195
                                                                                                                                                                                                                                                                                                                                   135
                                                               375
                                                                                                                               315
                                                                                                                                                                                               255
                                                                                                                                                                                                                                                                                                                                                                                                                                     62
                                                                                                                                                                                                                                                                                                                                                                                                    75
                                           Ś
                                                                                                           Ś
                                                                                                                                               밁
                                                                                                                                                                         S
                                                                                                                                                                                                               片
                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                             닭
                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                              1442
                                                                               1306
                                                                                                                                                                                                                 1192
                                                                                                                                                                                                                                                                                 1138
                                                                                                                                                                                                                                                                                                                                                  1085
                                                                                                                                                                                                                                                                                                                                                                                                                    1032
                                                                                                                                                                                                                                                                                                                                                                                                                                                     1082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1022 TGAGAGGATCAAATGTTTTTATATCAACATCCTTTATTATTTGATTCATTTGAGTTAACA 1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   436 TCTGTGAAGACCGCAAGGCTGAGCCTGAGGGGCTGCGGAGACTGCACCGCGCTGGGGTCC
                                    AACTCTTTT
             GACTETTT 1374
                                                                               ACGAAGAAATCACTCTGAAAATGAGTTCACGCCTCAAGAAGCAAATCCCCTGGAAAACACA 1365
                                                                                                           GTGAACAAGACACCCTAATAATGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAACGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTTTTTCAACAGCAT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AACGTTTTTCTATGACTTTTAGGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCATGG 1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGAAAGAACTTTCAAAAGCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTCTCCAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCATGCATGGTCACCTTCAAGCTACTTTAATAAAGGATCTTAAAAATGGGCAGGAGGACT
                                                                                                                                                                                                                                                                                                                                                                                 AACTCTTCCATCAGGCCATGATCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTG 1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTGGTGTTAGTGATAGATTTTTCTATTCTTTTCCCTTGACGTTTACTTTCAAGTAACACA 1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGAGACGACCACAGTTTGTTACACCCACCCTGTGTTCCTTGATTTCATTTGAATTCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GACAGTGGATAAAAAACAGTCCTTCAAGTCTTCTCTGTTTTTATTCTTCAACTCTCACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTTTGGGACTTTGATAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAATAGCCATCATGACCTTCAAAGATTATTTTTTACTGCTGGAATACTTTTTGTAGAAAAACC
                                                                                                                                               AGAATGCACGATCGCCTCTGGGTGATTTCAATAAAGGATCTTAAAATGCAGATGAGGACT
                                                                                                                                                                                                                                              ACCCCAAACCATCTCTCCAAAGCATTAATATCCAATCATGCGCTGTATGTTTTAATCAGC 1261
                                                                                                                                                                                                                                                                                                                                                 GGGGTATCAGTGACGGATTCTTCTATTCTTTCCCTCTAAGGCTCACTTTCAGG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AACATCGCCATCTACTGGGGAACAGCATAACTTCCAGACTTTGGGTCGTGAATGATGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AACATTGTCCCCTACT-GGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AATAGAGAAGGAACACAGGTCTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCTTAGAGTTTACAGAAAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGACTGGATAGAAAAACAACCCTTCA--ACTACATGTTTTTCTTCTTAAGTACTCACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGTTGGGATTTTGAAAGCAACCTCCTGGAATGTCACACGTGATGAAATTTCT---CTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AACTTCGGCGCATCCTTTTGCCCCTTGTACGAAGTCGATGACTTGCGAGATGCATTTCGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCTTCGGCGCATCCTTTTGCCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTGAAAGAACTTTCAAAGCCTGGGAAGGGCTACATGAAAATTCTGTCCGGCTAACCAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGATCGGGATCATGACCTTCAAAGACTATTTTTACTGCTGGAATACATTTGTAGAAAATC
                                                                                                                                                                                                                                                                               - CACAAGCCATTCTCTCAAAAACATTAATACTCAGGCACATGCTGTATGTTTTCA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGGACCGCCAGAGCAATGATGTAAC-----
                                                                                                                                                                                                               -----CTGTCCGTCGTGTTTTTCACATTTGTATGTGAAAGGGCTTGGGGGTGGGATTTGA
                                              1450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -----TTATATGACTTTTTAAAAAATACTTGAGCTGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ----TGAGCTTGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    --GGAAAAGCATAT
                                                                                                                                               1305
                                                                                                                                                                                                             1245
                                                                                                                                                                                                                                                1321
                                                                                                                                                                                                                                                                               1191
                                                                                                                                                                                                                                                                                                                                                 1137
                                                                                                                                                                                                                                                                                                                                                                                                                  1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1031
                                                                                                              1441
                                                                                                                                                                                1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   495
```

```
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 5477
; LENGTH: 13862
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-764-891-5477
                                                                                                                                                                                                                 RESULT 7
US-09-764-891-10204
                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 6
US-09-764-891-5477
                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 5477, Application US/09764891
Publication No. US20030077808A1
GENERAL INFORMATION:
APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies
FILE REFERENCE: PC006
                                                                                                            Sequence 10204, Application US/09764891
publication No. US20030077808A1
GENERAL INFORMATION:
APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                  FILE REFERENCE: PC006
CURRENT APPLICATION NUMBER: US/09/764,891
CURRENT FILING DATE: 2001-01-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/764,891
CURRENT FILING DATE: 2001-01-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Prior application data removed - consult PALM or NUMBER OF SEQ ID NOS: 10231
Prior application data removed - consult PALM or NUMBER OF SEQ ID NOS: 10231 SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1628
                                                                                                                                                                                                                                                                                                                                                                                                                 2086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1568 CTGAGGCAGGAGGATCACTTGAGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1667 AAACAGAATGATAAAGCTGCGAACCGTGGCACACGCTCATAGTTCTAGCTGCTTGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         397;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGCTTGAACCCAGGAGGTGGAGGTTGCAGTAAGCTGAGATCGTGCCGTTGCACTCCAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gccaggcgreeragcagcaccreraarcccagcractreggaggcreaggcaggagaar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTTTGAGACCAGCCTGGCCAACATGGCAAAACCCCGTCTGTACTCAAAATGCAAAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCACGCCTGTAATCCCAGCACTTTGGGAAGGCCGAGCCGGGCGGATCACCTGTGGTCAGGA 1905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAACTTAATAAGCTGGGCTGGGCTCTGTGGCTCATGCCTGTGATCCCAGCACTTTGGGAGG
                                                                                                                                                                                                                                                                                                                                    AGAGAACAATATTTGGGAGAGAAGGATGGGGAAGCATTGCAAGGAAATTGTG 2197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCAGGCTTTATGGTAGGCGCCTATAATCCCAGCTACTCGGAAGGCTGAGGCAGGAGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTTCAAGACCAGCCTGGACAACATGGCAAAACCCTGTCTCTATTAAAAAATACAAAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCATGCCTGTAATCCCAGCACTTTGGGAGGCCGAGGTGGGCGGATCACCTGAGGTCAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATCCTGTCTCAAAAAAAAAAAAAAAAAAAAAAAAGAAGGA-GAGAGGCCGGGCGTGGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTGAGGAGGGAGGATGGCTTGAACACAGGTGTTCAAGGCCAGCCTGGGCAACATAACAAG
                                                                                                                                                                                                                                                                                                                                                                                                               CGTTTGAAGCCAGGAGGCGGAGTTTGCACCGAGCCGAGATTGTGCCACTGCACTCCAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 295.2; DB 10; Pred. No. 5.6e-52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         file wrapper
                                        file wrapper
                                                                                                                    Antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 13862;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1567
                                                                                                                                                                                                                                                                                                                                                                                                                                                     1927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1845
```

```
; SEQ ID NO 10204
; LENGTH: 13862
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-764-891-10204
                           S
                                                                밁
                                                                                            Ś
                                                                                                                                 片
                                                                                                                                                                S
                                                                                                                                                                                                   문
                                                                                                                                                                                                                               $
                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                        멼
                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 397;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                     1748
                                                                                                                                                                                                                                                                                                                                       1688
                                                                                                                                                                                                                                                                                                                                                                                                          1628
                                                                1928
                                                                                                                                  1868
                                                                                                                                                                                                     1808
                                                                                                                                                                                                                                    1966
                                                                                                                                                                                                                                                                                                      1906
                                                                                                                                                                                                                                                                                                                                                                         1846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1667 AAACAGAATGATAAAGCTGCGAACCGTTGGCACACGCTCATAGTTCTAGCTGCTTGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTGAGGAGGGAGGATGGCTTGAACACAGGTGTTCAAGGCCAGCCTGGGCAACATAACAAG 1786
                             AGAGAACAATATTTGGGAGAGAAGGATGGGGAAGCATTGCAAGGAAATTGTG
                                                                                          CGTTTGAAGCCAGGAGGCGGAGTTTGCACCGAGCCGAGATTGTGCCACTGCACTCCAGCC
                                                                                                                                                                                                   GCCAGGCTTTATGGTAGGCGCCTATAATCCCCAGCTACTCGGAAGGCTGAGGCAGGAGAAT
                                                                                                                                                                                                                                  GCCAGGCGTGGTAGCAGGCACCTGTAATCCCAGCTACTTGGGAGGCTGAGGCAGGAGAAT
                                                                                                                                                                                                                                                                     GTTCAAGACCAGCCTGGACAACATGGCAAAACCCCTGTCTCTATTAAAAATACAAAAATTA
                                                                                                                                                                                                                                                                                                     GTTTGAGACCAGCCTGGCCAACATGGCAAAACCCCCGTCTGTACTCAAAAATGCAAAAATTA 1965
                                                                                                                                                                                                                                                                                                                                       TCATGCCTGTAATCCCAGCACTTTGGGAGGCCGAGGTGGGCGGATCACCTGAGGTCAGGA
                                                                                                                                                                                                                                                                                                                                                                         TCACGCCTGTAATCCCAGCACTTTGGGAGGCCGAGCCGGGCGGATCACCTGTGGTCAGGA 1905
                                                                                                                                                                                                                                                                                                                                                                                                          ATCCTGTCTCTCAAAAAAAAAAAAAAAAAAAAAAAAGA-GAGAGGGCCGGGCGTGGTGGC 1845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGAGGCAGGAGGATCACTTGAGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAACTTAATAAGCTGGCTGGGCTCTGTGGCTCATGCCTGTGATCCCAGCACTTTGGGAGG
AGAAAAATTAGCCAGCGTGGTGGCATGCACCTGTAGTCCTAGCTACTTGGG
                                                                                                                                                                  CGCTTGAACCCAGGAGGTGGAGGTTGCAGTAAGCTGAGATCGTGCCGTTGCACTCCAGCC
                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches 133;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 295.2; DB Pred. No. 5.6e-52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 13862;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>ب</u>
                                 2197
2038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                         1747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1627
                                                                                                                                                                                                                                                                                                                                                                                                          1687
                                                                                                                                                                                                                                                                       1807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1726
                                                                                                 2145
                                                                                                                                    1927
                                                                                                                                                                   2085
                                                                                                                                                                                                     1867
                                                                                                                                                                                                                                      2025
```

US-10-205-428-1003

Sequence 1003, Application US/10205428

Publication No. US20030108907A1

GENERAL INFORMATION:

APPLICANT: Rosen et al.

TITILE OF INVENTION: Nucleic Acids, Proteins, and Antil
FILE REFERENCE: PA117C1

CURRENT APPLICATION NUMBER: US/10/205,428

CURRENT FILING DATE: 2002-07-26

PRIOR APPLICATION NUMBER: 60/179,065

PRIOR FILING DATE: 2001-01-17

PRIOR PPLICATION NUMBER: 60/179,065

PRIOR FILING DATE: 2000-02-04

PRIOR APPLICATION NUMBER: 60/214,886

PRIOR APPLICATION NUMBER: 60/217,487

PRIOR APPLICATION NUMBER: 60/217,487

PRIOR APPLICATION NUMBER: 60/217,487

PRIOR FILING DATE: 2000-06-28

PRIOR APPLICATION NUMBER: 60/217,487

PRIOR APPLICATION NUMBER: 60/217,487

PRIOR FILING DATE: 2000-08-14

PRIOR APPLICATION NUMBER: 60/220,963

PRIOR FILING DATE: 2000-08-14

PRIOR APPLICATION NUMBER: 60/220,963

PRIOR FILING DATE: 2000-07-12

PRIOR APPLICATION NUMBER: 60/227,496

PRIOR APPLICATION NUMBER: 60/220,963

PRIOR FILING DATE: 2000-07-11

PRIOR PRIOR PRIOR DATE: 2000-07-11

PRIOR PRIOR FILING DATE: 2000-07-11

```
밁
                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                 US-09-764-891-6094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; ORGANISM: Homo sapiens US-10-205-428-1003
                                                                                                                                  Sequence 6094, Application US/09764891
Publication No. US20030077808A1
GENERAL INFORMATION:
APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins,
FILE REFERENCE PC006
CURRENT APPLICATION NUMBER: US/09/764,891
CURRENT FILING DATE: 2001-01-17
                                             Prior application data removed - consult PALM NUMBER OF SEQ ID NOS: 10231
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 6094
LENGTH: 7809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 1019
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 1003
LENGTH: 13862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 397;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
TYPE: DNA
ORGANISM: Homo sapiens
-09-764-891-6094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 60/225,447
PRIOR FILING DATE: 2000-08-14
PRIOR APPLICATION NUMBER: 60/218,290
PRIOR FILING DATE: 2000-07-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1568
                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCACGCCTGTAATCCCAGCACTTTGGGAGGCCGAGCCCGGGCGGATCACCTGTGGTCAGGA 1905
                                                                                                                                                                                                                                                                                                                                                                                        AGAGAACAATATTTGGGAGAGAAGGATGGGGAAGCATTGCAAGGAAATTGTG 2197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGCTTGAACCCAGGAGGTGGAGGTTGCAGTAAGCTGAGATCGTGCCGTTGCACTCCAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      eccaeecereeraecaecaecreraarcccaecracreegaeecreaecaecaeaaar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTTTGAGACCAGCCTGGCCAACATGGCAAAAACCCCGTCTGTACTCAAAATGCAAAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCCCATCTCTACTAAAAATACAAAAGTTAGCCAGGCATGGGCCGGGCATGGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGAGGCAGGAGGATCACTTGAGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTGAGGAGGGAGGATGGCTTGAACACAGGGTGTTCAAGGCCAGCCTGGGCAACATAACAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAACTTAATAAGCTGGCTGGGCTCTGTGGCTCATGCCTGTGATCCCAGCACTTTGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAACAGAATGATAAAGCTGCGAACCGTGGCACACGCTCATAGTTCTAGCTGCTTGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGTTTGAAGCCAGGAGGCGGAGTTTGCACCGAGCCGAGATTGTGCCACTGCACTCCAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCAGGCTTTATGGTAGGCGCCTATAATCCCAGCTACTCGGAAGGCTGAGGCAGGAGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTTCAAGACCAGCCTGGACAACATGGCAAAACCCTGTCTCTATTAAAAATACAAAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCATGCCTGTAATCCCAGCACTTTGGGAGGCCGAGGTGGGCGGATCACCTGAGGTCAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGAAAAAATTAGCCAGCGTGGTGGCATGCACCTGTAGTCCTAGCTACTTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       o
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 295.2; DB 14;
Pred. No. 5.6e-52;
0; Mismatches 133;
                                                                                                                                                                                             and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 14; Length 13862;
                                                                                                                       Or.
                                                                                                                                                                                             Antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                              2145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . 1747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1726
                                                                                                                                                                                                                                                                                                                                                                                                                             1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ņ
```

```
밁
                            Ś
                                                            밁
                                                                                       S
                                                                                                                                                                                   ; LENGTH: 32249
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-764-891-7364
                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 10
US-09-764-891-7364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                            Prior application data removed - consult PALM
NUMBER OF SEQ ID NOS: 10231
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 7364
                                                                                                                                                                                                                                                                                                                                                                                    Sequence 7364, Application US/09764891 Publication No. US20030077808A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 385; Conserv
                                                                                                                        Matches 365;
                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                      APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins,
FILE REFERENCE: PC006
CURRENT APPLICATION NUMBER: US/09/764,891
CURRENT FILING DATE: 2001-01-17
                                                                                                                                       Local Similarity
                                                              15040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1432
                                                                                          1682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1666 AAAACAGAATGATAAAGCTGCGAACCGTGGCACACGCTCATAGTTCTAGCTGCTTGGGAG
                                                            GCCTGGTACAGTGGCTCATGCCTGTAACCTCAGCACTTCGGGAGATCTAGGCGGTCAGAT 15099
                                                                                         GTGTAACAAAGTATTGCGA
                           GGCTTGAACACAGGTGTTCAAGGGCCAGCCTGGGCAACATAACAAGATCCTGTCTCTCAAA 1801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCAGGCGTGGTAGCAGGCACCTGTAATCCCAGCTACTTGGGAGGCTGAGGCAGGAGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAGAGAACAATATTTGGGA 2163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGATTGAACCTAGGAGGCAGAGGTTGTAGTGAGCTGAGATCGTGCCATTGCACTCCAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGCTTGAACCCAGGAGGTGGAGGTTGCAGTAAGCTGAGATCGTGCCGTTGCACTCCAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTTCAAGAGCAGCCTGACCAACATGGTGAAACCCCCATGTCTACCAAAAATACAAAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTTTGAGACCAGCCTGGCCAACATGGCAAAACCCCCGTCTGTACTCAAAAATGCAAAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AACCCTGTCTCTACATTTAAAAAAAAAAAAAAAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCTGAGGCAGGAGGATCACTTGAGCCCAGGAGCTCAAGACCAACCTGCACAAGATGATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTTGAGGAGGAGGATGGCTTGAACACAGGTGTTCAAGGCCAGCCTGGGCAACATAACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAAAAGTTAAAATCAGGCTGGGCATGGTGGCTCACGCCTATAATCCCAGCACTTTGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCTGGGCGTGGTGGCTCATGCCTGTAATCCCAGCTACTTGGGGAGGCTGAGGCAGGAGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCACACCTGTAATCCCAGAACTTTGGGAGGCCGAGGTGGGCGGATCACCTGAGGTCAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCACGCCTGTAATCCCAGCACTTTGGGAGGCCGAGCCGGGCGGATCACCTGTGGTCAGGA
                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                   10.1%;
75.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10.4%;
                                                                                                                     Score 284.4; DB 10;
Pred. No. 1.8e-49;
0; Mismatches 116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 292.6; DB 10;
Pred. No. 1.4e-51;
0; Mismatches 104;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1570
                                                                                                                                                   DB 10;
                                                                                                                                                                                                                                                                                                                                                         and
                                                                                                                                                                                                                                                                                            유
                                                                                                                                                                                                                                                                                           file wrapper
                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10;
                                                                                                                     1; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                       1741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1725
15159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2
```

S

AAAAAAAAAAAAAAAAAAAAGAGAGAGAGAGGGCCGGGCGTGGTGGTCACGCCTGTAATCCC 1861

```
GENERAL INFORMATION:

APPLICANT: Soppet, Daniel
TITLE OF INVENTION: Sers
FILE REFERENCE: 689290-75
CURRENT APPLICATION NUMBER: US/09/962,436
CURRENT FILING DATE: 2001-09-25
PRIOR APPLICATION NUMBER: US/60/235,082
PRIOR APPLICATION NUMBER: US/60/234,924
PRIOR APPLICATION NUMBER: US/60/234,924
PRIOR FILING DATE: 2000-09-25
PRIOR APPLICATION NUMBER: US/60/234,924
PRIOR FILING DATE: 2000-09-25
PRIOR FILING DATE: 2000-09-25
PRIOR FILING DATE: 2000-09-25
PRIOR PRIOR DATE: 2000-09-25
NUMBER OF SEQ ID NOS: 568
SOFTWARE: Patentin version 3.0
                                                            Ś
                                                                                                                    밁
                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                   뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 11
US-09-962-436-292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
             밁
                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-962-436-292
                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 292, Application US/09962436 Patent No. US20020081301A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
NAME/KEY: misc_feature
OTHER INFORMATION: n=a,t,g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH: 65608
                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Sin
                                                                                                                                                                                                                             43149 CCCTTGAGCCCAGAAGTTCAA-GCCAGCCTGGGCAATGTAGGGAGACGCCATCTCTACTA
                                                                                                                                                                                                                                                                                                                                      43089 GCCGGGTGTGGTGGCTCACGCCTGTAATCCCAGCACTTTGGAAGTCTGAGGCAGGAGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15160
                                                                                                                                                                        1802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ΤA
                                                 CCAGCACTTTGGGAGGCCGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCC 1919
                                                                                                                                                                GGCTTGAACACAGGTGTTCAAGGCCAGCCTGGGCAACATAACAAGATCCTGTCTCTCAAA
                                                                                                                                                                                                                                                                                                                                                                                       GCCAACATGGCAAAACCCCCGTCTGTACTCAAAATGCAAAAATTAGCCAGGCGTGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTGGAGGTTGCAGTAAGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                escacctstaatcccasctacttessassctsasscassaaaatcsctsaacccassas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCCAACATGGTGAAATCTCATCTCTACTGAAAATACAAAATTAGCCAGGCATGGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGCCCTTTGGGAGGCCAAGGCAGGCGGTTCATTTGAGGGTCAGGAGTTTGAGACCAGCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGCACTTTGGGAGGCCGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTG 1921
             CCAGCACTTTGGGAGGCTGAGGCAGGCGGATCAC--GAGGTCAGGAGTTTGAGACCAGCC
                                                                                                                      AAAAAAAAAAAAAAAAGAAGAATTTAGGCCGGGCGTGGTGGCTCACGCCTGTAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGCGCCTGTAATCCCAGCTACTCAAGAGGATGAGGCAGGAGAAATGCTTGAATCCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15520
                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 281.4; DB 9;
Pred. No. 1.2e-48;
0; Mismatches 81;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                65608;
                                                                                                                                                                                                                                                                                                                                                                                                                                         ٠.
و
                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                       1741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1981
                                                                                                                                                                        1859
                                                                                                                                                                                                                             43207
                                                                                                                                                                                                                                                                                 1801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Using Signatu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15339
             43325
                                                                                                                      43267
                                                                                                                                                                                                                                                                                                                                      43148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15219
                                                                                                                                                                                                                                                                                                                                                                                                                                         4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/09/962,832
CURRENT FILING DATE: 2001-09-25
PRIOR APPLICATION NUMBER: US/60/235,077
PRIOR FILING DATE: 2000-09-25
PRIOR APPLICATION NUMBER: US/60/235,280
PRIOR FILING DATE: 2000-09-25
PRIOR FILING DATE: 2000-09-25
NUMBER OF SEQ ID NOS: 259
SOFTWARE: Patentin version 3.0
SEQ ID NO 119
        S
                                                                  밁
                                                                                                              á
                                                                                                                                                                        片
                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; FEATURE:
, NAME/KEY: misc feature
, OTHER INFORMATION: n=a,t,g
US-09-962-832-119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 12
US-09-962-832-119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: Ebner, Reinhard
APPLICANT: Ebner, Reinhard
TITLE OF INVENTION: Cancer Gene Determination and Therapeutic Screening Using Signat
TITLE OF INVENTION: Sets
FILE REFERENCE: 689290-74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 376; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 119, Application Patent No. US20020110821A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 65608
TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         43386
                                                                                                                                                                                                                                                                                                                                                                                          43208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                43149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         43089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   43446
                                                                                                                                                                                                                             1920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1920
             2040
AGGTGGAGGTTGCAGTAAGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGCTTGAACACAGGTGTTCAAGGCCAGCCTGGGCAACATAACAAGATCCTGTCTCTCAAA 1801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCCTTGAGCCCAGAAGTTCAA-GCCAGCCTGGGCAATGTAGGGAGACGCCATCTCTACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCGGGTGTGGTGGCTCACGCCTGTAATCCCAGCACTTTGGAAGTCTGAGGCAGGAGGAT 43148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCAGCACTTTGGGAGGCCGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCC 1919
                                                                                                                                                                                                                                                                                                                                                                                          AAAAAAAAAAAAAAAAGAAGAAGTTTAGGCCGGGCGTGGTGGCTCACGCCTGTAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                            AAAAAAAAAAAAAAAAAGA--AAGAGAGAGGGCCCGGGCGTGGTGGCTCACGCCTGTAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGGCGCCTGTAATCCCAGCTACTCAGGAGGCTGAGGCAGGAGAATTGCTTCAACCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAGGCACCTGTAATCCCAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGGCCAAGATGGTGAAAACCCTGTCTCTACTAAAAAATACAAAAATTAGCCAGGCACGGTGG
                                                                                                                      CAGGCACCTGTAATCCCAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGG
                                                                                                                                                                                                                                                                                 CCAGCACTTTGGGAGGCTGAGGCAGGCGGATCAC - - GAGGTCAGGAGTTTGAGACCAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGGCGGAGGTTGCAGTGAGCCAAGATCGTGCCACTGTACTCCAGCCTGGGTGACAA-AGC 43504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 тенессья сапенсавания с с сепствтя стельная песья в в таке с в нестана песья в нестана песья в нестана в не
                                                                                                                                                                                                                          TGGCCAACATGGCAAAACCCCCGTCTGTACTCAAAATGCAAAAATTAGCCAGGCGTGGTAG 1979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGGTGGAGGTTGCAGTAAGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGC
                                                                                                                                                                        TGGCCAAGATGGTGAAACCCTGTCTCTACTAAAAATACAAAAATTAGCCAGGCACGGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/09962832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    얹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 281.4; DB 9
Pred. No. 1.2e-48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                  \GGCTGAGGCAGGAGAATTGCTTCAACCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       65608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
             2099
                                                                                                                      2039
                                                                                                                                                                                                                                                                                                                                                                                                                                               1859
                                                                                                                                                                                                                                                                                 43325
                                                                                                                                                                                                                                                                                                                                                                                          4326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   43207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         43445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2039
                                                                  43445
                                                                                                                                                                           43385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     43385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4
```

맑 Ś B

```
RESULT 13
US-09-954-531-180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches 376;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 180, Application US/09954531 Patent No. US20020165180A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: PatentIn version SEQ ID NO 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OTHER INFORMATION: n=a,t,g
-09-954-531-180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: US/60/234,034
PRIOR FILING DATE: 2000-09-20
PRIOR APPLICATION NUMBER: US/60/234,509
PRIOR FILING DATE: 2000-09-22
PRIOR APPLICATION NUMBER: US/60/234,567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Weaver, Zoe
TITLE OF INVENTION: Process for Identifying
TITLE OF INVENTION: Gene Sets
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: US/60/233,133
PRIOR FILING DATE: 2000-09-18
PRIOR APPLICATION NUMBER: US/60/234,009
PRIOR FILING DATE: 2000-09-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/954,531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR FILING DATE: 2000-09
NUMBER OF SEQ ID NOS: 1392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY: misc_feature
LOCATION: (1)...(65608)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE: 689290-77
                   43446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      43446
                                                                                                                        1980
                                                                                                                                                                                                                                                             1860
                                                                                                                                                                                                                                                                                                                                                                                                1742 GGCTTGAACACAGGTGTTCAAGGCCAGCCTGGGCAACATAACAAGATCCTGTCTCTCAAA 1801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             65608
                                                                                                                                                                                        TGGCCAACATGGCAAAACCCCCGTCTGTACTCAAAATGCAAAAATTAGCCAGGCGTGGTAG
                                                                                                                                                                                                                                                           CCAGCACTTTGGGAGGCCGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCC
                                                                                                                                                                                                                                                                                                                             CCCTTGAGCCCAGAAGTTCAA-GCCAGCCTGGGCAATGTAGGGAGACGCCATCTCTACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCGGGTGTGGTGGCTCACGCCTGTAATCCCAGCACTTTGGAAGTCTGAGGCAGGAGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGGTGGAGGTTGCAGTAAGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGC
                                                                                                                      CAGGCACCTGTAATCCCAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGG
                                                                                                                                                                                                                         CCAGCACTTTGGGAGGCTGAGGCAGGCGGATCAC~-GAGGTCAGGAGTTTGAGACCAGCC
                                                                                                                                                                                                                                                                                           AAAAAAAAAAAAAAAAAAAGAAGAAGTTTAGGCCGGGCGTGGTGGCTCACGCCTGTAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGGCGGAGGTTGCAGTGAGCCAAGATCGTGCCACTGTACTCCAGCCTGGGTGACAA-AGC
                                                                                      CGGGCGCCTGTAATCCCAGCTACTCAGGAGGCTGAGGCAGGAGAATTGCTTCAACCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (80959)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000-09-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ព្ព
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            വ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 281.4; DB 9
Pred. No. 1.2e-48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Anti-Cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       81;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 65608;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Therapeutic Agents
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                 2099
                                                                                                                                                                                        1979
                                                                                                                                                                                                                                                           1919
                                                                                                                                                                                                                                                                                                                             1859
                                                                                                                    2039
                                                                                                                                                        43385
                                                                                                                                                                                                                                                                                           43267
                                                                                                                                                                                                                                                                                                                                                              43207
                                                                                                                                                                                                                                                                                                                                                                                                                                 43148
                   43504
                                                                                                                                                                                                                         43329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      43504
                                                                                     43445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Using Canc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-764-877-2857
; Sequence 2857, Application
; Patent No. US20020147140A1
                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                         문
                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                 맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; TYPE: DNA
; ORGANISM: Homo
US-09-764-877-2857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                   US-10-242-515-2857
                                                 Sequence 2857, Appli
Publication No. US20
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOPTWARE: PatentIn Ver. 2.0
SEQ ID NO 2857
LENGTH: 11821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic
FILE REFERENCE: PC005C1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/764,877
CURRENT FILING DATE: 2001-01-17
Prior application data removed - refer to
NUMBER OF SEQ ID NOS: 4031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic
FILE REFERENCE: PC005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Sin
                                                                                                                                                                                                                                                                                                             4944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2100
                                                                                                                                                                                                                                         5004
                                                                                                                                                                                                                                                                           2055
                                                                                                                                                                                                                                                                                                                                              1995
                                                                                                                                                                                                                                                                                                                                                                              4884
                                                                                                                                                                                                                                                                                                                                                                                                                1935
                                                                                                                                                                                                                                                                                                                                                                                                                                                 4824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1635 AGGTATATTAACTATAAGAGAGTTGTGACAAAACAGAATGATAAAGCTGCGAACCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAAAAAAAAAAAAAAGAGAGAGAGAGAAAGAGAAACA 2153
                                                                                                                                                                                                                                         TGAGCCGGGATCGCACCATTACACTACAGCCTGGGCAAGAAGAGTGAAACTCTGTCTCAA 5063
                                                                                                                                                                                                                                                                         TAAGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAGACTCTGTCTCAG
                                                                                                                                                                                                                                                                                                             CCAGCTACTTGGAAGGCTGAGGCAGGAGAATCACTTGAATCTGGGAGGTGGAGGTTGCAG
                                                                                                                                                                                                                                                                                                                                     CCAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCCAGGAGGTGGAGGTTGCAG
                                                                                                                                                                                                                                                                                                                                                                                AACCCCGTCTGTACTCAAAATGCAAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCGAAGCGGGCAGATTACCTGAGGTCAGGAGTTCGAGACCAGCCTGGCCAACATTGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gccgAgccggggggaTcAccTgTgGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAAAGAAAGAGAGAGAGGGCCGGGCGTGGTGGCTCACCCCTGTAATCCCCAGCACTTTGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGTTCAAGACCAGTCTGGGCAATATAGTAAGACCTTGTCTCTACAAAAAATGAAAAAA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCTCATGCCGGTAATCCCAGCACTTTAGGA-ATTTAGGCAGGAGGATCACTTGAGGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCACACGCTCATAGTTCTAGCTGCTTGGGAGGTTGAGGAGGAGGATGGCTTGAACACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGGAAACTGCAAACTATGTTGCAGCAGCAAGAAGAAATGAACATGAAGCCAGGCATGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AATAAAATAAAATAAAATAAAATAAAATAAAATA
                                                                 Application US/10242515
. US20040009488A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTGGCCAGGCGTGGTGGCTCACGCCTGTAATTCCAGCACTTTGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US/09764877
                 Acids,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Acids, Proteins,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>.</u>.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 280.2; DB 9;
Pred. No. 8e-49;
0; Mismatches 118;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        refer to PALM
                 Proteins,
                 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        or file wrapper
                   Antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Antibodies
                                                                                                                                                                        . 5102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 11821;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1814
                                                                                                                                                                                                                                                                           2114
                                                                                                                                                                                                                                                                                                             5003
                                                                                                                                                                                                                                                                                                                                              2054
                                                                                                                                                                                                                                                                                                                                                                                4943
                                                                                                                                                                                                                                                                                                                                                                                                                  1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                 4883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4776
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1694
```

'n

8 皮 Ś

8

멂

S 片 Ś 밁 Ś 당 Ś 밁

문

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                            S
                                                                                                밁
                                                                                                                                          S
                                                                                                                                                                                           Ď,
                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                      맑
                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; TYPE: DNA; Homo sapiens; ORGANISM: Homo sapiens US-10-242-515-2857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/10/242,515
CURRENT FILING DATE: 2002-09-13
PRIOR APPLICATION NUMBER: 09/764,877
PRIOR FILLING DATE: 2001-01-17
PRIOR APPLICATION NUMBER: 60/179,065
PRIOR FILING DATE: 2000-01-31
PRIOR APPLICATION NUMBER: 60/180,628
PRIOR FILING DATE: 2000-02-04
PRIOR FILING DATE: 2000-02-04
PRIOR APPLICATION NUMBER: 60/214,886
PRIOR FILING DATE: 2000-06-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 60/214,886
PRIOR FILING DATE: 2000-06-28
PRIOR PELICATION NUMBER: 60/217,487
PRIOR PILING DATE: 2000-07-11
PRIOR APPLICATION NUMBER: 60/225,758
PRIOR APPLICATION NUMBER: 60/225,758
PRIOR PILING DATE: 2000-08-14
PRIOR APPLICATION NUMBER: 60/220,963
PRIOR FILING DATE: 2000-07-26
PRIOR FILING DATE: 2000-07-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 4031
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 2857
ENGTH: 11821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 386; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 60/218,290 PRIOR FILING DATE: 2000-07-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: 60/225,447
PRIOR FILING DATE: 2000-08-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/217,496 FILING DATE: 2000-07-11
                                                                                                                                                                                             4944
                                                                                                                                                                                                                                                                                                                                                                                      4824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4718
                                                                                             5004
                                                                                                                                            2055
                                                                                                                                                                                                                                            1995
                                                                                                                                                                                                                                                                                         4884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1815 AAAAGAAAGAGAGGGCCGGGCGTGGTGGTGGCTCACGCCTGTAATCCCCAGCACTTTGGGAG 1874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4659 GCTCATGCCGGTAATCCCAGCACTTTAGGA-ATTTAGGCAGGAGGATCACTTGAGGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4599 AGGAAACTGCAAACTATGTTGCAGCAGCAAGAAGAATGAACATGAAGCCAGGCATGATG
                                                                                                                                                                                                                                                                                                                                                                                                                 1875 GCCGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAA 1934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1635 АССТАТАГТААСТАТАГААСАСАСТТСТСАСААААСАСАТСАТАААССТСССААСССТС
                                                                                                                                                                                                                                                                                                                                     1935 AACCCCGTCTGTACTCAAAATGCAAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAATC 1994
                                         AAAAAAAAAAAAAAAAGAGAGAGAGAGAAAAGAGAAAAA 2153
                                                                                                                                  TAAGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAGAGCTCTGTCTCAG 2114
                                                                                                                                                                                                                        CCAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGAGGTGGAGGTTGCAG 2054
                                                                                                                                                                                                                                                                                                                                                                                    GCCGAAGCGGGCAGATTACCTGAGGTCAGGAGTTCGAGACCAGCCTGGCCAACATTGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGTTCAAGACCAGTCTGGGCAATATAGTAAGACCTTGTCTCTACAAAAAATGAAAAAA 4776
                                                                                                                                                                                        CCAGCTACTTGGAAGGCTGAGGCAGGAGAATCACTTGAATCTGGGAGGTGGAGGTTGCAG
                                                                                                                                                                                                                                                                                      AATAAAATAAAATAAAATAAAATAAAATAAAATA 5102
                                                                                             TGAGCCGGGATCGCACCATTACACTACAGCCTGGGCAAGAAGAGTGAAACTCTGTCTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9.9%; Score 280.2; DB 15; Length 11821; ilarity 74.4%; Pred. No. 8e-49; Conservative 0; Mismatches 118; Indels 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ---TTGGCCAGGCGTGGTGGCTCACGCCTGTAATTCCAGCACTTTGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15; Gaps
                                                                                           . 5063
                                                                                                                                                                                                                                                                                      4943
                                                                                                                                                                                                                                                                                                                                                                                    . 4883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4658
                                                                                                                                                                                        5003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2;
```

Search completed: March

7, 2004, 14:48:44

Job time : 971 secs

BX464579 BX392040 BQ065440 BQ055935 BX391067

AGENCOURT BX391067 BX392040 BX464579

AGENCOURT

BG68613 602634412
BG755726 60271524
BG755726 602746579
BG755726 602244579
BF975106 602244579
BG754140 602709681
BG754140 602709681
BG754140 602709681
BG754140 602709682
AL581406 AL581406
BG341546 602463652
BF664355 602146013
BX402062 BX402062
AW978582 EST390691
BG399364 602439933
AW978582 EST390691
BG399364 602439832
AW504807 UI-HF-BN0
BG7758815 6071131751
BF238155 6071131751
BF238155 6071131751
BF238155 6027131751
CD707143 EST23670
BG170824 602323671
CD707143 EST23670
BG170824 602323671
CD707143 EST23670
BG170824 602323671
CD707143 EST23670
BG170824 002323671
CD707143 EST23670
BG170824 002323671
CD707143 EST23670
BG170824 002323671
CD707143 EST23670
AW135547 UI-H-B13-AX080144 MNB muscu
AJ446140 AJ446140
AJ446140 AJ446140
AJ446140 AJ446140

```
Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Title:
Perfect score:
                                                                                Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Total number of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OM nucleic -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Post-processing:
                                                                  No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    음
::
                                                                                                                                Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BB BB
 970.2
878.8
847
817.4
                                                               Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                seq
4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                  Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    March
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27513289 seqs, 14931090276 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
 34.4
31.2
30.1
29.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Copyright
                                                                                                                                                                                                                                                                                                                                                                                        em estro
em htc: * *
gb est2: * *
gb est3: * *
gb est4: * *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   em_estov:*
em_estpl:*
                                                                                                                                                                                   em_gss_pro:*
em_gss_rod:*
em_gss_phg:*
em_gss_vri:*
gb_gss1:*
gb_gss2:*
                                                                                                                                                                                                                                                                                           em gss pln: *
em gss vrt: *
em gss fun: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             em_estmu:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            em_estin:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        em_esthum:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     em_estba:*
                                                                                                                                                                                                                                                                  em_gss_mam:*
em_gss_mus:*
                                                                                                                                                                                                                                                                                                                                   em_gss_hum:*
em_gss_inv:*
                                                                                                                                                                                                                                                                                                                                                               em_estfun:*
em_estom:*
                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7, 2004, 06:30:42; Search time 7086 Seconds (without alignments) 11875.759 Million cell updates/sec
 1201
1201
872
854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GenCore version 5.1.6 (c) 1993 - 2004 Compugen Ltd.
                                                                  멂
                                      13
AL559877
2 BG758510
3 BX464578
                                                                  IJ
                                      BX402063
BX402063 BX402063
AL559877 AL559877
BG758510 602712721
BX464578 BX464578
                                                                 Description
                                                                                                                                                            REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                             KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                       RESULT 1
BX402063
LOCUS
                                                                                                                                                                                                                                                                    ACCESSION
VERSION
                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukarycta; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

E 1 (bases 1 to 1201)

E 1i,W.B., Gruber,C., Jessee,J. and Polayes,D.
Full-length cDNA libraries and normalization

Unpublished (2001)

Contact: Genoscope
Genoscope - Centre National de Sequencage
BP 191 91006 EURY cedex - France
Email: seqref@genoscope.cns.fr, Web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 6672.r For
more information about this cluster, see

http://www.genoscope.cns.fr/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      493.6
490.8
490.8
490.8
490.8
490.8
490.8
490.8
490.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       809.4
799.2
781.2
780.8
777.8
705.6
705.6
667.4
                                                                                                                                                                                                                                                                                                                                                                                                                                   441214
441214
4009.8
4005.8
4005.2
3669.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           626
572.6
572.6
568
562
551.4
546.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    655.4
653.2
627.6
                                                                                                                                                                                                                                                                                             BX402063 Homo sapiens B CELLS (RAMOS CELL LINE) COT 25-NORWALIZED Homo sapiens CDNA clone CSODL012YD18 5-PRIME, mRNA sequence.
cgi-bin/cluster.cgi?seq=CSODL012DB09QP1&cluster=6672.r. Conta
Feng Liang Email : fliang@lifetech.com URL :
http://fulllength.invitrogen.com/ InVitroGen Corporation 1600
                                                                                                                                                                                                                                                                     BX402063
BX402063.1 GI:30626645
                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                           Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                   9
12
12
13
13
13
13
13
13
                                                                                                                                                                                                                                                                                                                                                                                                                                AJ446140
AJ453647
D AW263139
D BG144705
D AW401901
AJ450296
AJ450317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 BG757392
2 BG341346
2 BG341345
3 BY664355
3 EX402062
2 BG39B364
4 BG39B364
2 BG758B15
2 BG758B05
2 BG758B164
2 BG758B164
2 BG758B164
2 BG17084
3 BG1707143
4 BG1707143
5 BG1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BG755526
BF975096
BF975166
BG754140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BX391067
BX464579
BX392040
BG686133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BQ065440
BQ055935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BG757089
                                                                                                                                                                                                                                                                                                                                                                                            ALIGNMENTS
```

AW263139 xn78d03.x BG144705 ut73f07.y AW401901 UI-HF-BK0 AJ450296 AJ450296

AJ450317

Contact

```
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 1004;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       313
                                                                                                                                       660
                                                                                                                                                                               673
                                                                                                                                                                                                                     600
                                                                                                                                                                                                                                                            613
                                                                                                                                                                                                                                                                                                    540
                                                                                                                                                                                                                                                                                                                                            553
                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                                                           493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   133
                                                                                                733
                  793
                                                        720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Faraday
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGAGAACCATCATTAATTGAAGTGAGATTTTTTCTGGCCTGAGACTTGCAGGGGAGGCAAGA 60
                                                GAAGACAGTGGATAAAAAAAACAGTCCTTCAAGTCTTCTCTGTTTTTATTCTTCAACTCTCA
                                                                                                                           GTACTTTGGGACTTTGATAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCT
                                                                                                                                                                                                        GACAGCTTCGGCGCATCCTTTTGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTC
                                                                                                                                                                                                                                                                                                                                                                       GCAAATAGCCATCATGACCTTCAAAGATTATTTTTACTGCTGGAATACT-TTTGTAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGCTACCGCGTCACCTGGTTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGGCGTGACAGTGCTACATCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGACACTCTGGACACCACTATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCA 120
                                                                                                                                                                                                                                                            ACCATGAAAGAACTTTCAAAAGCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTCCA
                                                                                                                                                                                                                                                                                                  ACCATGAAAGAACTTTCAAAGCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTCTCCA
                                                                                                                                                                                                                                                                                                                                              GCAAATAGCCATCATGACCTTCAAAGATTATTTTTACTGCTGGAATACTGTTTGTAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                             GGCCGACTTTCTGCGAGGGAACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCTCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGCCGACTTTCTGCGAGGGAACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCTCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGCTACCGCGTCACCTGGTTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGCCACGTGGAATTGCTCTTCCTCCGCTACATCTCGGACTGGGACCTAGACCCTGGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGCCACGTGGAATTGCTCTTCCTCCGCTACATCTCGGACTGGGACCTAGACCCTGGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGGCGTGACAGTGCTACATCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGAGAACCATCATTAATTGAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGGAGGCAAGA
                                                                                                                                                                               GACAGCTTCGGCGCATCCTTTTGCCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Avenue Genoscope sequence ID : CSODL012DB09QP1. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and ECOR V sites of the pCMVSPORT 6 vector. Library was normalized."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone="CSODL012YD18"
/cell type="B CELLS (RAMOS CELL LINE) COT 25-NORWALIZED"
/cell_line="RAMOS CELL LINE"
/clone_lib="Homo sapiens B CELLS (RAMOS CELL LINE) COT 25-NORWALIZED"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /mol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  34.4%;
94.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      _type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 970.2; DB 13
Pred. No. 1.9e-116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                     659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   192
                                                            779
                                                                                                                                         719
                                                                                                                                                                                                                                                            672
                                                                                                                                                                                                                                                                                                      599
                                                                                                                                                                                                                                                                                                                                              612
                                                                                                                                                                                                                                                                                                                                                                                   539
                                                                                                                                                                                                                                                                                                                                                                                                                         552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      252
                    852
                                                                                                                                                                                 732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 2
AL559877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCUS
DEFINITION
                                                                           Query Match
Best Local S
Matches 930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                             Local Similarity 90.
hes 930; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     780
  32
                                       20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 1201)

Li,W.B., Gruber,C., Jessee,J. and Polayes,D.

Full-length cDNA libraries and normalization

Unpublished (2001)

On Feb 15, 2001 this sequence version replaced gi:12905793.

Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AL559877
AL559877.2
                                                                                                                                                                                                                                                                                                                                                                                                                             Faraday Avenue Genoscope sequence ID : CSODG003DA07QP1.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 http://www.genoscope.cns.fr/
cgi-bin/cluster.cgifseq=CSDDG003DA07QP1&cluster=6672.r. Contact
Feng Liang Email: fliang@lifetech.com URL:
http://fulllength.invitrogen.com/ InVitroGen Corporation 1600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: seqref@genoscope.cns.fr, Web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 6672.r For
more information about this cluster, see
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - France
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AL559877 1201 bp mRNA
AL559877 Homo sapiens B CELLS (RAMOS CELL
clone CSODG003YB14 5-PRIME, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCAACGTTTTTCTATGACTTTTAGGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCAT 1019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TSRSASGWHAAWSTTTTWWWAAAAAAMCTTATTWTTKRTTATTTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGTGAGAGGATCAAATGTTTTTATATCAACATCCTTTATTATTTGAT 1066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGCAACATTGTCCCCTACTGGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAAAATAGAGAAAGGAACACAGGGTCTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTTTCTTAGAGTTTAYAGAAAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTT
                               AAGTGAGATTTTTCTGGCCTGAGACTTGCAGGGAGGCAAGAAGAAGACACTCTGGACACCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCAA-GTTTTWCTATGAATTTTAGGTAGGTK--RGRSMSGAGGTAGAWMYWAAAAVAWSG 1089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGCAACATTGTCCCCTACTGGGRATAACASAACTGCASGACYTSGGASCWTCYTAAAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAAAATAGAGAAGGAACACAGGTCTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTTTCTTAGAGTTTACAGAAAAAATATTTATATATACGACTCTTTAAAAAAGATCTATGTCTT
  AAGCAGGCTGGTACCGGTCCGGAATTCCCGGGATGGCAAGAAGACACTCTGGACACCACT
                                                                                                                                                                             /CIOTRE="CSODG003YB14"
/CIOTRE="CSODG003YB14"
/tissue type="B CELLS (RAMOS CELL LINE)"
/cell line="RAMOS CELL LINE"
/clone lib="Homo sapiens B CELLS (RAMOS CELL LINE)"
/clone lib="Homo sapiens B CELLS (RAMOS CELL LINE)"
/note="Vector: pCMVSPORT 6; 1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoRV sites of the pCMVSPORT 6 vector.
Library was not normalized."
                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GI:31284008
                                                                                                  31.2%;
                                                                               24;
                                                                             Score 878.8; DB 9;
Pred. No. 1.2e-104;
4; Mismatches 67;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             bp mRNA line
s (RAMOS CELL LINE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear ES
                                                                                 Indels
                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EST 31-MAY-2003
                                                                               ű
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sapiens cDNA
                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    912
    91
```

Ś 밁 Š B á 밁 Ś B Ś 밁 Ś 망 á В 5 В 8 뮍 Ş 밁 Ş 밁 Ş

Ś 밁

밁

Ś

Ś

ທຸ

can

þe

```
RESULT 3
BG758510
LOCUS
                                                                                                                                                                                                        뮍
                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                        맑
                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   맑
                                                                                                                                                                                                          987
                                                                                                                                                                                                                                                        980
                                                                                                                                                                                                                                                                                                  932
                                                                                                                                                                                                                                                                                                                                               920
                                                                                                                                                                                                                                                                                                                                                                                           872
                                                                                                                                                                                                                                                                                                                                                                                                                                     860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           80
      BG758510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAAAAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTCTCCAGACAGCTTCGGCGCATCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AACCCCAACCTCAGTCTGAGGATCTTCACCGCGCCCTCTACTTCTGTGAGGACCGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTCCTCCGCTACATCTCCGGACTGGGACCTAGACCCTGGCCGCTGCTACACCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGGCTGCCACGTGGAATTGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCTAAGGGTCGGCGTGAGACCTACCTGTGCTACGTAGTGAAGAGGCGTGACAGTGCTACA
                                                                                                                                                              TTATAT 1045
                                                                                                                                                                                                          WGGWGGDTGRRSARAGGWRATCYWAAAACATGGGRGAGGTHAATKTTTTWTYAAAYCTTT
                                                                                                                                                                                                                                                    TTAGGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCATGGTGAGAGGATCAAATGTTT 1039
                                                                                                                                                                                                                                                                                              GRA--WAAARAMIKCAAGACCIGGGRGAICCIAAAIGI---AAMGITITITWIGAYTIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TIGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTGATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTCAAAGATTATTTTTACTGCTGGAATACTTTTGTAGAAAACCATGAAAGAACTTTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTGAGCCCGAGGGGCTGCGGCGCGCGCGCGCGCGCGCAAATAGCCATCATGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGTGGCCGACTTTCTGCGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGGCTGCCACGTGGAATTGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCTAAGGGTCGGCGTGAGACCTACCTGTGCTACGTAGTGAAGAGGCGTGACAGTGCTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAATTCAAAAATGTCCGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAAATTCAAAAATGTCCGCTGG
                                                                                                                      TTWTTT 1052
                                                                                                                                                                                                                                                                                                                                            GGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCAACGTTTTTCTATGACTT
                                                                                                                                                                                                                                                                                                                                                                                      GETCTGGCCAGGGGGCGTGCTGCAATTGGTGCAGTTTTGAATGCAACATTGTCCCYACTKG
                                                                                                                                                                                                                                                                                                                                                                                                                                GGTCTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGCAACATTGTCCCCTACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAAAATAGAGAAGGAACACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAAAATAGAGAAGGAACACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGTCCTTCAAGTCTTCTCTGTTTTTATTCTTCAACTCTCACTTTCTTAGAGTTTACAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAAAAAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTGATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTCTCCAGACAGCTTCGGCGCATCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTCAAAGATTATTTTTACTGCTGGAATACTTTTGTÄGAAAACCATGAAAGAACTTTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTGAGCCCGAGGGGCTGCGGGGCTGCACCGCGCGGGGTGCAAATAGCCATCATGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCTCTACTTCTGTGAGGACCGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGTGGCCGACTTTCTGCGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCCTCCGCTACATCTCGGACTGGGACCTAGACCCTGGCCGCTGCTACCGCGTCACCTGG
    872
    à
      mRNA
    HST
    15-MAY-2001
                                                                                                                                                                                                          1046
                                                                                                                                                                                                                                                                                                                                            979
                                                                                                                                                                                                                                                                                                                                                                                      931
                                                                                                                                                                                                                                                                                                                                                                                                                                  919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
TITLE
                                            밁
                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
S
                                                                                   Ş
                                                                                                                                    밁
                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                   片
                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
    376
                                                302
                                                                                                                                      242
                                                                                                                                                                                256
                                                                                                                                                                                                                             182
                                                                                                                                                                                                                                                                         196
                                                                                                                                                                                                                                                                                                                                                               136
                                                                                                                                                                                                                                                                                                                   122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          861;
                                                                                                                                                                                                                                                                                                                                                                                                           62
                                                                                                                                                                                                                                                                                                                                                                                                                                                       76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      602712721F1 NIH_MGC_48 mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
plate: LLCM1698 row: i column: 06
High quality sequence stop: 836.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
cDNA Library Preparation: Ling Hong/Rubin Laboratory
cDNA Library Arrayed by: The I.M.A.G.E. Consortium ()
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates; 1 (bases 1 to 872)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BG758510
BG758510.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Robert Strausberg,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                            CTGGGCTAAGGGTCGGCGTGAGACCTACCTGTGCTACGTAGTGAAGAGGCGTGACAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTGAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGGAGGCAAGAAGACACTCTGGACAC
    AGGGAACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCTCTACTTCTGTGAGGACCG
                                                                                                                                                              GCTCTTCCTCCGCTACATCTCGGACCTGGACCCTGGCCGCTGCTGACCGCGTCAC
                                                                                                                                                                                                                                                      TACATCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGGCTGCCACGTGGAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                            CACTATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAATTCAAAAATGTCCG
                                                                     CTGGTTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGTGGCCGACTTTCTGCG
                                                                                                                                      GCTCTTCCTCCGCTACATCTCGGACTGGGACCTAGACCCTGGCCGCTGCTACCGCGTCAC
                                                                                                                                                                                                                             TACATCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGGCTGCCACGTGGAATT
                                                                                                                                                                                                                                                                                                                   CTGGGCTAAGGGTCGGCGTGAGACCTACCTGTGCTACGTGAGAGAGGCGTGACAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                           CACTATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAATTCAAAAATGTCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /tissue_type="primary B-cells from tonsils (cell line)"
/lab host="DHIOB (phage-resistant)"
/clone_lib="NIH MGC 48"
/clone_lib="NIH MGC 48"
/note="Organ: B-cells; Vector: pOTB7; Site_1: XhoI;
/note="Organ: B-cells; Vector: pOT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                clone="IMAGE:4853069"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GI:14069163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30.1%;
99.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 847; DB 12;
Pred. No. 2e-100;
0; Mismatches 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sapiens cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Craniata; Vertebrata; i
Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IMAGE: 4853069
```

872;

<u>'</u>.

Gaps

5

75

121

135

195

181

밁 5

CGACTTTCTGCG

361

375

301 315 241 255

435

S

ঠ

/cell_līne="RAMOS CELL LINE" /clone_lib="Homo sapiens B CELLS (RAMOS CELL LINE)"	/clone="csobgoo3yB14" /tissue_type="B CELLS (RAMOS CELL LINE)"	/mol_type="makk" /db xref="taxon:9606"	rce	Faraday Avenue Genoscope sequence ID : CS1DG001ZF10NP1. FEATURES Location/Oualitiers	h.com URL :	http://www.genoscope.cns.fr/ cgi-bin/cluster.cgi?seq=CS1DG001ZF10NP1&cluster=6672.r. Contact :	<pre>invitrogen. This sequence belongs to sequence cluster 6672.r For more information about this cluster, see</pre>	Genoscope - Centre National de Sequencage BP 191 91006 EVRY cedex - France	Æ	4, 11 4, 11	Admaniyota; Amerikasa; Chidridata; Craniata; Vertebrata; Suteresconni; Mammalia; Sutheria; Primates; Catarrhini; Hominidae; Homo. REFERENCE 1 (bases 1 to 854)	Organia Crassianta Correstanta.	EST.	ACCESSION EX464578	ITION EX464578 Homo sapiens B CELLS (RAMOS CELL LINE) Homo clone CSODG003YB14 3-PRIME, mRNA sequence.	BX464578/c	RESULT 4	Db 842 CCCCGGTCTGG-CAGGGACGTGCTGCA 867	OY 856 CACAGGTCTGGCCAGGGACGTGCTGCA 882	Db 782 AGCAAAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAAAATAGAGAAGGCA 841	OY 796 AGAAAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAAAATAGAAGGAA 855	722 AAACAGTCCTTCAAGTCTTCTCTGTTTTTTTTCTTCAACTCTCACTTTCTTAGAGTTTAC	QY 736 AAACAGICCIICAAGICTICIGITITITATICTICAACICICACITICITAGAGITIAC 795	Db 662 ATAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAA 721	Oy 676 ATAGCAACTTCCAGGAATGTCACACGATGAAATATCTCTGCTGAAGACAGTGGATAAA 735	Db 602 CCTTTTGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTG 661	Qy 616 CCTTTTGCCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTG 675	Db 542 CAAAGCCTGGGAAGGCTGCATGAAAATTCAGTTCGTCTCCAGACAGCTTCGGCGCAT 601	OY 556 CAAAGCCTGGGAAGGCTGCATGAAAATTCAGTTCGTCTCTCCAGACAGCTTCGGCGCAT 615	482 GACCTTCAAAGATTATTTTTACTGCTGGAATACTTTTGTAGAAAACCATGAAAGAACTTTT	-	Db 422 CAAGGCTGAGCCCCAGGGGCTGCGCGCGGCGGCGGGTGCAAATAGCCATCAT 481	000
RESULT 5	₽	0у 1	Db	29/	타	97	DB		Qy 1	Db	Qy 1	96	0у 1	B	0у 1:	DЬ	0γ 1:	Db da	0у 1:	ממ	Qy 1:		.τ 1:		1		γ	0	Qy S	Best Loca Matches	Onerv Match	ORIGIN	
	14 ccreecaan	1769 CCTGGGCA	74 rrcreecre	1709 TTCTAGCTC	134 TÁTAAGAGA	1649 TATAAGAG <i>I</i>	194 AGGTCAAGG		.529 TGTTGGGGA	314 GAAAAACCC	.469 GAAACACCC	374 GATTTCTGA	.409 GATGTCTGA	434 TTAATAAAC	1349 TTAATAAG	494 AGAAGATTG	1289 AGAAGATTG	554 ATATCCAGT	229 ATATCCAAT	614 GGACCTCCT	1169 GGACCTCCT		1109 CTTTTCCCT	734 CATCCTTTA	1049 CATCCTTA	: 794 ATGAGRGCA	989 ATGAGAGCA	854 GAACTGCAG	929 GAACTGCAG	Local Similarity nes 816; Conser	B.	Ľi.	do

/note="Vector: pCMVSPORT_6; 1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoRV sites of the pCMVSPORT 6 vector. Library was not normalized."

AA 1777 ¥ .. 29.0%; Score 817.4; DB 13; ty 96.1%; Pred. No. 1.3e-96; ervative 17; Mismatches 16; IGCTTGGGAGGTTGAGGAGGGAGGATGGCTTGAACACAGGTGTTCAAGGCCAG JAGTTGTGACAAAACAGAATGATAAAGCTGCGAACCGTGGCACACGCTCATAG GTTTGCTACATTTTGTATGTTTTGATGCTTCTCCCAAAGGTATATTAACTA GETTTGCTACATTTTGTATGTGTGTGTGATGCTTCTCCCAAAGGTATATTAACTA JAGAGGAAAATCTATTGGCTCTCGTGGGTCTCTTCATCTCAGGAATGCCAATC HAGAGGAAAATCTATTGGCTCTCGTGGGTCTCTTCATCTCAGAAATGCCAATC <u> PAAGTAGCAAATCTTCTGGAAACGCAAACTCTTTTAAGGAAGTCCCTAATTTA</u> JAAGTAGCAAATCTTCTGGAAACGCAAACTCTTTTAAGGAAGTCCCCTAATTTA AGGATCTTAAAATGGGCAGGAGNACTGTGAACAAGACACCCTAATAATGGGTT IGGATCTTAAAATGGGCAGGAGGACTGTGAACAAGACACCCTAATAATGGGTT TGTTATGGGTGGGGATGGAGGTATAGACCATGCATGGTCACCTTCAAGCTACT ATCATGCGCTGTATGTTTTAATCAGCAGAAGCATGTTTTTATGTTTTGTACAAA TAATGAGAGTATCTGGGTGATTGTGACCCCAAACCATCTCTCCCAAAGCATTA lagaaggtagatcctaaaaagcatggtgagaggatcaaatgttttatatcaa 1048 GGACCTGGGRGCATCCTAAAGTGTCAACGTTTTTCTATRACTTTTAGGTRGG GTTATGGGTGGGGATGGAGGTATAGACCATGCATGGTCACCTTCAAGCTACT TTGACGTTMACTTTCAAGTAACACAAACTCTTCCATCAGGCCATGATCTATA TTGACGTTTACTTTCAAGTAACACAAACTCTTCCATCAGGCCATGATCTATA σ Indels Length 0 Gaps 1168 1768 1708 135 1648 1588 1528 315 1468 375 435 1348 1288 1228 1108 15 195 255 1408 495 555 615 675 735 795 75 0

```
REFERENCE
AUTHORS
TITLE
  밁
                                     S
                                                                              밁
                                                                                                                 Ś
                                                                                                                                                          В
                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                          뮍
                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                       317
                                                                                241
                                                                                                                                                                                                 197
  301
                                                                                                                     257
                                                                                                                                                            181
                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                               137
                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     828;
                                                                                                                                                                                                                                                                                                                                                             77
                                                                                                                                                                                                                                                                                                                                                                                                                                              17
                                                                                                                                                                                                                                                                                                                                                                                                     \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 953 bp
AGENCOURT 6855061 NIH_MGC_99 Homo
5', mRNA sequence.
BOD65440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov plate: LLCM2108 row: p column: 10 High quality sequence stop: 634.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Lou Staudt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BQ065440.1 GI:19894486
BQ065440.1 EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

[ [bases 1 to 953]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Robert Strausberg,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDNA Library Preparation: Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
                          TGGTTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGTGGCCGACTTTCTGCGA
                                                                                                                                                                                 ACATCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGGCTGCCACGTGGAATTG
                                                                                                        CTCTTCCTCCGCTACATCTCGGACTGGGACCTAGACCCTGGCGCTGCTACCGCGTCACC
                                                                                                                                                          ACATCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGGCTGCCACGTGGAATTG
                                                                                                                                                                                                                                        TGGGCTAAGGGTCGGCGTGAGACCTACCTGTGCTACGTAGTGAAGAGGCGTGACAGTGCT
                                                                                                                                                                                                                                                                       TGGGCTAAGGGTCGGCGTGAGACCTACCTGTGCTACGTAGTGAAGAGGCGTGACAGTGCT
                                                                                                                                                                                                                                                                                                                    ACTATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAATTCAAAATGTCCGC
                                                                                                                                                                                                                                                                                                                                                                                                   TTGAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGGAGGCAAGAGACACTCTGGACACC
                                                                                                                                                                                                                                                                                                                                                                                                                                 TTGAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGGAGGCAAGAAGACACTCTGGACACC
                                                                              CTCTTCCTCCGCTACATCTCGGACTGGGACCTAGACCCTGGCCGCTGCTACCGCGTCACC
                                                                                                                                                                                                                                                                                                                                                       ACTATEGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAAATTCAAAAATGTCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone="IMAGE:5929977"
/clone="IMAGE:5929977"
/tissue_type="lymphoma, cell line"
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC 99"
/clone_lib="NIH_MGC 99"
/note="Organ: lymph; Vector: pOTB7, Site_1: XhoI; Site_2:
ECORI; cDNA made by oligo-dT priming. Directionally cloned into EcoRI/XhoI sites using the following 5' adaptor:
GCACGAG(G). Size-selected >500bp for average insert size
GCACGAG(G). Size-selected by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley)
using ZAP-cDNA synthesis kit (Stratagene) and Superscript
ILRT (Life Technologies). Note: this is a NIH_MGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               organism="Homo sapiens"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 809.4; 1
Pred. No. 1.3e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .4; DB 13;
1.3e-95;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mRNA linear EST 02-APR-2002 sapiens cDNA clone IMAGE:5929977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        953;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                         136
360
                                                                              300
                                                                                                                 316
                                                                                                                                                        240
                                                                                                                                                                                               256
                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                           196
                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                          76
```

FEATURES

source

/clone="IMAGE:5808181" /tissue_type="lymphoma, cell line" /lab_host="DH10B (phage-resistant)"

/organism≈"Homo sapiens" /mol_type≈"mRNA" /db_xref="taxon:9606"

ocation/Qualifiers

.1052

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 6
BQ055935
                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ŗ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                            SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    855
                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Cre
Mammalia; Eutheria; Primates; Cat
1 (bases 1 to 1052)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Ma
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 841 A 841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   377
                                                                  Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Lou Staudt
CDNA Library Preparation: Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.B. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Plate: LLCM2051 row: m column: 14 High quality sequence stop: 665.
                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                   1052 bp
AGENCOURT 6796291 NIH MGC 99 Homo
5', mRNA sequence.
BOOKEGOOF
                                                                                                                                                                       Contact: Robert Strausberg,
                                                                                                                                                                                                                                                                                                                                           BQ055935.1 GI:19815262
                                                                                                                                                                                                                                                                                                            Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                              BQ055935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A 855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAAAAAATATTTATATACGACTCTTTAAAAAAAGATCTTATGTCTTGAAAATAGAAGAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAAAAAATATTTATATACGACTCTTTAAAAA---GATCTATGTCTTGAAAATAGAGAAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AACAGTCCTTCAAGTCTTCTCTGTTTTTATTCTTCAACTCTCACTTTCTTAGAGTTTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AACAGICCTICAAGICTICTCTGTTTTTATTCTTCAACTCTCACTTTCTTAGAGITTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAAGCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTCTCCAGACAGCTTCGGCGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      табсаасттосаббаатегсасасасвебатбааататстстветбаабасабтбебатаааа
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTTTTGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTTTTGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCTTCAAAGATTATTTTACTGCTGGAATACTTTTGTAGAAAACCATGAAAGAACTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGGAACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCTCTACTTCTGTGAGGACCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAAGCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTCCAGACAGCTTCGGCGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCTTCAAAGATTATTTTTACTGCTGGAATACTTTTGTAGAAAACCATGAAAGAACTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGGAACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCTCTACTTCTGTGAGGACCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGGCTGAGCCCGAGGGGCTGCGGCGGCTGCACCGCGGCGGGGTGCAAATAGCCATCATG
                                                                                                                                                                       Ph.D.
                                                                                                                                                                                                                                                         Craniata; Vertebrata; | Catarrhini; Hominidae;
                                                                                                                                                                                                        Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                            sapiens
                                                                                                                                                                                                                                                                                                                                                                                                             mRNA
                                                                                                                                                                                                                                                                                                                                                                                               CDNA
                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                              clone
                                                                                                                                                                                                                                                           Euteleostomi;
; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                             EST 29-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                               IMAGE:5808181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 436
```

```
AGAAAAATATTTATATACGACTCTTT-AAAAAGATCTATGTCTTGAAAA 844
                                                                                                                              AACAGTCC-TTCAAGTCTTCTCTGTTTTTATTCTTCAACTCTCACTTTCTTAGAGTTTAC
                                                                                                                                                                                                                       TAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAAA
                                                                                                                                                                                                                                                                                                                   CTTTTGCCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                 AAAGCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTCTCCAGACAGCTTCGGCGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCTTCAAAGATTATTTTTACTGCTGGAATACTTTTGTAGAAAACCATGAAAGAACTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGGAACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCCTCTACTTCTGTGAGGACCGC
                                                                                                                                                                                            TAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAANA
                                                                                                                                                                                                                                                                                        CTTTTGCCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTGA
                                                                                                                                                                                                                                                                                                                                                                                      AAAGCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTCTCCAGACAGCTTCGGCGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCTTCAAAGATTATTTTTACTGCTGGAATACTTTTGTAGAAAACCATGAAAGAACTTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGGCTGAGCCCGAGGGGCTGCGGCGGCTGCACCGCGGGGGTGCAAATAGCCATCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAGGCTGAGCCCGAGGGGCTGCGCGGCTGCACCGCGCGGGGTGCAAATAGCCATCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGGAACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCTCTACTTCTGTGAGGACCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTCTTCCTCCGCTACATCTCGGACTGGGACCTAGACCCTGGCCGCCTGCTACCGCGTCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGGGCTAAGGGTCGGCGTGAGACCTACCTGTGCTACGTAGTGAAGAGGCGTGACAGTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACTATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAATTCAAAAATGTCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTGAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGGGAGGCAAGAAGACACTCTGGACACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TEGTTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGTGGCCGACTTTCTGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGGTTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGTGGCCGACTTTCTGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTCTTCCTCCGCTACATCTCGGACTGGGACCTAGACCCTGGCCGCTGCTACCGCGTCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACATCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGGCTGCCACGTGGAATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACATCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGGCTGCCACGTGGAATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGGGCTAAGGGTCGGCGTGAGACCTACCTGTGCTACGTAGTGAAGAGGCGTGACAGTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACTATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTACCAATTCAAAAATGTCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTGAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGGAGGCAAGAAGACACTCTGGACACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone_lib="NIH_MGC_99"
/note="Organ: lymph; Vector: pOTB7; Site_1: XhoI; Site_2:
ECORI; CDNA made by oligo-dT priming. Directionally cloned.
Into EcoRI/XhoI sites using the following 5' adaptor:
GGCACGAG(G). Size-selected >500bp for average insert size
1.8kb. Library constructed by Ling Hong in the laboratory
of Gerald M. Rubin (University of California, Berkeley)
using ZAP-CDNA synthesis kit (Stratagene) and Superscript
II.RT (Life Technologies). Note: this is a NIH_MGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 799.2; DB 1
Pred. No. 2.6e-94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>ა</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1052;
    830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    196
                                                                                              780
                                                                                                                                             795
                                                                                                                                                                                            720
                                                                                                                                                                                                                                         736
                                                                                                                                                                                                                                                                                        660
                                                                                                                                                                                                                                                                                                                                       676
                                                                                                                                                                                                                                                                                                                                                                                      600
                                                                                                                                                                                                                                                                                                                                                                                                                                     616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 7
BX391067
LOCUS
밁
                                          Ş
                                                                                           В
                                                                                                                                     Ś
                                                                                                                                                                                          밁
                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                   뮍
                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                              242
                                                                                                                                             994
                                                                                                                                                                                          182
                                                                                                                                                                                                                                         934
                                                                                                                                                                                                                                                                                                                                       874
                                                                                                                                                                                                                                                                                        122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                872;
                                                                                                                                                                                                                                                                                                                                                                                      62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens B
BX391067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BX391067
BX391067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 http://www.genoscope.cns.fr/
cgi-bin/cluster.cgi?geq=CS0BAG061ZH04_CS05792_1&cluster=6672.r.
Contact: Feng Liang Email: fliang@lifetech.com URL:
Contact: Feng Liang Email: fliang@lifetech.com URL:
http://fulllength.invitrogen.com/ InvitroGen Corporation 1600
http://fulllength.invitrogen.com/ InvitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID: CS0BAG061ZH04_CS05792_1.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BP 191 91006 EVRY cedex - France
Email: segref@genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 6672.r For
more information about this cluster, see
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 918)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Genoscope - Centre National
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BX391067.1 GI:30615325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Genoscope
                                                                                                                                                                                                                                                                                                                   CGTGCTGCAATTGGTGCAGTTTTGAATGCAACATTGTCCCCCTACTGGGAATAACAGAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCTGTTTTTATTCTTCAACTCTCACTTTCTTAGAGTTTA-CAGAAAAAAATATTTATATA-
                                                                                                                                                                                                                            CGACTCTTTAAAAAGATCTATGTCTTGAAAATAGAGAAGGAACACAGGTCTGGCCAGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                    CGACTCTTTAAAAAGATCTATGTCTTGAAAATAGAGAAGGAACACAGGTCTGGCCAGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTTTTATTTCTTAACTTCTCACTTTTTCTTAGAGTTTACCAGAAAAAATATTTATATAC
                             TTTATTATTTGATTCATTTGAGTTAACAGTGGTGTTAGTGATAGATTTTTCTATTTT
                                                                                              AGCAGAAGGTAGATCCTAAAAAGCATGGTGAGAGGATCAAATGTTTTTATATCAACATCC
                                                                                                                                        AGCAGAAGGTAGATCCTAAAAAGCATGGTGAGAGGATCAAATGTTTTTATATCAACATCC
                                                                                                                                                                                            CGTGCTGCAATTGGTGCAGTTTTTGAATGCAACATTGTCCCCTACTGGGAATAACAGAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-NORMALIZED"

/note="1st strand cDNA was primed with a NotI-oligo(dT)

primer. Flve prime end enriched, double-strand cDNA was

digested with Not I and cloned into the Not I and Ecor v

sites of the pCMVSPORT 6 vector. Library was normalized
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone="CSODLO12YD18"
/cell type="B CELLS (RAMOS CELL LINE) COT 25-NORMALIZED"
/cell line="RAMOS CELL LINE"
/clone_lib="Homo sapiens B CELLS (RAMOS CELL LINE) COT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           organism="Homo sapiens"
|mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 781.2; DB 13; Pred. No. 6.1e-92;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    918 bp mRNA linear EST 13-MCELLS (RAMOS CELL LINE) COT 25-NORMAC CSODLO12YD18 5-PRIME, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                de Sequencage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST 13-MAY-2003
25-NORMALIZED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
```

Ś

7.7

밁

17

Local Similarity

Conservative

\$ 밁

밁 δ

781 796 721 737 199 677 601 617 541 557 481 497 421 437 361 377 301 317 241 257 181 197 121 137 61

CCCTTGACGTTTACTTTCAAGTAACACAAACTCTTCCATCAGGCCATGATCTATAGGACC

1173

361

1113

1053

301

993

181 933

241

9

813

9

121 873

Ś В 8 맑 Ś 片 8 밁 Ś 밁 S 밁 S 밁 Ś 밁 S 밁 Ś 밁

밁

RESULT 9		
Db 806 AAAATATTTATATACGACTCTTTAAAAAGATCTATGTBTTG	rce	
Qy 800 AAAATATTTATATACGACTCTTTAAAAGATCTATGTCTTGJ	Fernilres Formation (Oranical Filer) Fernilres Formation (Onalifiers) Fernilres	
Qy 740 AGTCCTTCAAGTCTTCTGTTTTTATTCTTCAACTCTCACT :	F10QP1&cluster=6672.r. (
Qy 680 CAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGA	Email: seqref@genoscope.cns.fr, Web: www.genoscope.cns.fr Library was constructed by Life Technologies, a division of Invitrogen. This sequence belongs to sequence cluster 6672.r For more information about this cluster, see	
QY 620 TIGCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGT	JOURNAL Unpublished (2001) COMMENT Contact: Genoscope - Centre National de Sequencage BP 191 91006 EVRY cedex - France	_
ან ი ი	1 (bases 1 to 853) Li,W.B., Gruber,C., Jessee,J. Full-length cDNA libraries and	
1 U U	ens (human) ens Metazoa; Chordata; Craniata; Vertebrata; E	ro =
440 446	ON BX464579 Homo sapiens B CELLS (RAMOS CELL L clone CSODG003YB14 5-PRIME, mRNA sequence. N BX464579 BX464579.1 GI:31031641	יי לא
Qy 380 AACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCCTCTAC	BX464579 853 b	יל חו א
Qy 320 TTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGTC	Qy 1651 TAAGAAGTTGTGACAAA 1668 	п ~
Qy 260 TTCCTCCGCTACATCTCGGACTGGACCTAGACCCTGGCCGC	Qy 1591 GTCAAGGTTTGCTACATTTTGTATGTGTGATGCTTCCCAAAGGTATATTAACTATA 1650	н ^
200 206	1531 TTGGGGAGGAAAATCTATTGGCTCTCGTGGGTCTCTTCATCTCAGAAATGCCAATCAG	п ~
QY 140 GCTAAGGGTCGGCGTGAGACCTACCTGTGCTACGTAGTGAAC	QY 1472 ACACCCACAAACTTCACATATCATAATTAGCAAACAATTGG-AAGGAAGTTGCTTGAATG 1530	F ~
Qy 80 ATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAI	Qy 1412 GTCTGAAGTAGCAAATCTTCTGGAAACGCAAACTCTTTTAAGGAAGTCCCTAATTTAGAA 1471	
Qy 20 AAGTGAGATTTTTTTGGCCTGAGACTTGCAGGGAGGCAAGAI	Qy 1352 ATAAAGGATCTTAAAATGGGCAGGAGGACTGTGAACAAGACACCCTAATAATGGGTTGAT 1411	н.
Query Match 27.7%; Score 780.8; DB 13; Best Local Similarity 96.7%; Pred. No. 7.2e-92; Matches 801; Conservative 6; Mismatches 20; 1	Qy 1294 ATTGTTATGGGTGGGGATGGAGGTATAGACCATGCATGGTCACCTTCAAGCTACTTTA 1351	н с
the Not! I and ECORV sites of the pot Library was not normalized." ORIGIN	Qy 1234 CAATCATGCGCTGTATGTTTTAATCAGCAGAAGCATGTTTTTATGTTGTACAAAAGAAG 1293	
/clone lib="Homo sapiens B CELLS (Finance of the control of the co	QY 1174 TCCTAATGAGAGTATCTGGGTGATTGTGACCCCAAACCATCTCTCCAAAGCATTAATATC 1233	H ~
/clone="CSODGOO3YB14" /tissue_type="B CELLS (RAMOS CELL 1 /cell line="RAMOS CELL LINE"	Db 362 CCCTTGACGTTTACTTTCAAGTAACAAACTCTTTCCATCAGGCCATGATCTATAGGACC 421	H

s (RAMOS CELL LINE)"
strand cDNA was primed
live prime end enriched,
with Not I and cloned into
e pCMVSPORT 6 vector. LINE) "

Length 853;

Indels

AAGACACTCTGGACACCACT 79 1; Gaps

AMGACACTCTGGACACCACT 86

AATTCAAAAATGTCCGCTGG 139 AGAGGCGTGACAGTGCTACA 199 AATTCAAAAATGTCCGCTGG 145

AGAGGCGTGACAGTGCTACA 205

ecreccacerecaarrecre GCTGCCACGTGGAATTGCTC 259

GCTGCTACCGCGTCACCTGG GCTGCTACCGCGTCACCTGG

325 319 265

FIGGCCGACTITCTGCGAGGG 379 reecceaciircieceaeee 385

TGCAAATAGCCATCATGACC 499 **ACTTOTGAGGACCGCAAG** ACTTCTGTGAGGACCGCAAG 439

445

ACCATGAAAGAACTTTCAAA 559 riginal recent de la comparción de la comparción de la comparta de la comparción de la comp ACCATGAAAGAACTTTCAAA

565

AGACAGCTTCGGCGCATCCTT 619

GTACTTTGGGACTTTGATAG 679

GAAGACAGTGGATAAAAAAC 739

GAAAATAG 847

GAAAATAG 853

729	QY 669 GACTTTGATAGCAACTTCCAGGAATGTCACACACACGATGAAATATCTCTGCTGAAGAACACTTCCAGGAATGACACACAC	Qy 609 GGCGCATCCTTTTGCCCCTGTATGAGGATTGACGAGACGCATTTCGTACTTTGG	QY 549 GAACTTTCAAAGCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTCTCCAGACAGCTTC	Oy 489 CCATCATGACCTTCAAAGATTATTTTTACTGCTGGAATACTTTTGTAGAAACCATGAAA	4 8 # 5 5 0 5 3 9	3 6 9 1 1 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Query Match Best Local S Matches 875	th Not I and cloned into the Not I th Not I and cloned into the Not I e pCMVSPORT 6 vector. Library was	/CELL LINE RAWOS CELLS (RAMOS CELL LINE) COT /clone libe "Homo sapiens B CELLS (RAMOS CELL LINE) COT 25-NORWALIZED" /note="1st strand cDNA was primed with a NotI-oligo(dT)	/mol_type="maxxx" /db_xref="texon:9606" /clone="CSODLO12YD18" /cell_type="B_CELLS_(RAMOS_CELL_LINE) COT_25-NORMALIZED"	rce	Contact : Feng Liang Email : fliang@llfetech.com URL : http://fulllength.invitrogen.com/ InVitroGen Corporation 1600 Faraday Avenue Genoscope sequence ID : CSOBAI048ZH08_CS04576_ FRANTIDES	<pre>more information about this cluster, see http://www.genoscope.cns.fr/ cgi-bin/cluster.cgi?seq=CSOBAIO48ZHO8 CSO4576 1&cluster=66</pre>	Email: segref@genoscope.cns.fr, Web : www.genoscope.cns.fr Library was constructed by Life Technologies, a division o Invitrogen. This seguence belongs to seguence cluster 6672			Ammalia, Eucheria, Primates, Catarrhini, Hominidae, Homo. REFERENCE 1 (bases 1 to 920)	Homo sapiens (human)	31:30607824	DEFINITION BX392040 Homo sapiens B CELLS (RAMOS CELL LINE) COT 25 NORMALIZED Homo sapiens cDNA clone CSODL012YD18 3-PRIME, mRNA sequence.	BX392040 920 bp mRNA li
7 0	728 source	668 http://image.llnl.gov plate: LLCM1626 row: g colu High quality sequence stop: 7	6.80	740 COMMENT C	486 REFERENCE 1 (Dasses I to '743) AUTH-MGC NIH-MGC http://mgc.nci.nih.g 797 TITLE National Institutes of Heal JOURNAL Unpublished (1999)	428 SOURCE ORGANISM 854	7; VERSION BG686133 GI:13917530 KEYMORDS EST.	RESULT 10 BG686133 LOCUS DEFINITION	COT	Db 79 ACCATCTCTCAAAGCATT	Db 139	Db 199 1. Qy 1149	C Qy 1089	Oy 1029 ATCAAATGTTTTATATCAACATCCTTTATTA	Db 319	Db 379 GTCCCCTACTG3GAATAACAGAACTGCAGGAC Qy 969 TTCTATGACTTTTAGGTAGGATGAGAGCAGAA	. Qy	Db 439	0v 849	Qy 7	¥-2003 i

```
audt, M.D., Ph.D.
y Hong/Rubin Laboratory
I.M.A.G.E. Consortium (LLNL)
mics, Inc.
distribution information can be
pnsortium/LLNL at:
                                                                                                                         03
                                                                                                                                                                                                                                                                                                                                          niata, Vertebrata, Euteleostomi,
arrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mRNA linear EST 01-MAY-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cells from tonsils (cell line)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGGTAGATCCTAAAAAGCATGGTGAGAGG 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCTGGGAGCATCCTAAAGTGTCAACGTTT 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCAATTGGTGCAGTTTTGAATGCAACATT 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCAATTGGTGCAGTTTTGAATGCAACATT 908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTTAAAAAGATCTATGTCTTGAAAATAGA 848
                                                                                                                                                                                                                                                                                               mmalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGAGAGTATCTGGGTGATTGTGACCCCAA 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGAGAGTATCTGGGTGATTGTGACCCCAA 1208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGGTAGATCCTAAAAAGCATGGTGAGAGG 1028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCTGGGAGCATCCTAAAGTGTCAACGTTT 968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTTTTATTCTTCAACTCTCACTTTCTTAG 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          recectetatettttaatcaecaeaaeca 20
```

Matches

ń

Euteleostomi;

ğ

```
Query Match
Best Local Similarity
                                                                                                                                            724
                                                                                                                                                                                    662
                                                                                                                                                                                                                           664
                                                                                                                                                                                                                                                                  602
                                                                                                                                                                                                                                                                                                        604
                                                                                                                                                                                                                                                                                                                                               542
                                                                                                                                                                                                                                                                                                                                                                                      544
                                                                                                                                                                                                                                                                                                                                                                                                                              482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         124
                                                                                                       722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              740;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4 GAACCATCATTAATTGAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGGAGGCAAGAAGA
    BG757089
                                                                                                                                        ACAGTGGATAAAAAACAGTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGACTTTCTGCGAGGGAACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCTCTACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCACGTGGAATTGCTCCTCCGCTACATCTCGGACTGGGACCTAGACCCTGGCCGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCGTGACAGTGCTACATCCTTTTCACTGGACTTTTGGTTATCTTCGCAATAAGAACGGCTG
                                                                                                                                                                                                                                                                                                      GCTTCGGCGCATCCTTTTGCCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTAC
                                                                                                                                                                                                                                                                                                                                                                                    TGAAAGAACTTTCAAAGCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTCTCCAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AATAGCCATCATGACCTTCAAAGATTATTTTTACTGCTGGAATACTTTTTTTGTAGAAAACCA 543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTACCGCGTCACCTGGTTCACCTCCTGGAGGCCCCTGCTACGACTGTGCCCGACATGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCGTGACAGTGCTACATCCTTTTCACTGGACTTTTGGTTATCTTCGCAATAAGAACGGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CANAAATGTCCGCTGGGCTAAGGGTCGGCGTGAGACCTACCTGTGCTACGTAGTGAAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CACTCTGGACACCTATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CACTCTGGACACCACTATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAACCATCATTAATTGAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGGGAGGCAAGAAGA
                                                                                                                                                                                                                       TTTGGGACTTTGATAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAG 723
                                                                                                                                                                                                                                                                                                                                                                                                                            AATAGCCATCATGACCTTCAAAGATTATTTTTACTGCTGGAATACTTTTTGTAGAAAACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGACTTTCTGCGAGGGAACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCCTCTACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTACCGCGTCACCTGGTTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCACGTGGAATTGCTCTTCCTCCGCTACATCTCGGACTGGGACCTAGACCCTGGCCGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /lab_host="DH10B (phage-resistant)"
/clone_llb="NHH MGC 48"
/clone_llb="NHH MGC 48"
/clone_llb="NHH MGC 48"
/clone_llb="NHH B-cells; Vector: pOTB7; Site_1: XhoI;
Site_2: EcoRI; cDNA made by oligo-dT priming.
Directionally cloned into EcoRI/XhoI sites using the
following 5' adaptor: GGCACCAG(G). Size-selected >500bp
for average insert size 1.8kb. Library constructed by Ling
Hong in the laboratory of Gerald M. Rubin (University of
California, Berkeley) using ZAP-cDNA synthesis kit
(Stratagene) and Superscript II RT (Life Technologies).
Note: this is a NHH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 739.4; DB 1
Pred. No. 1.8e-86;
0; Mismatches 1
                                                                                                                                            744
    820
    å
    mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   743;
    EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>,</u>
    15-MAY-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                      663
                                                                                                                                                                                                                                                                                                                                                                                    603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              423
                                                                                                                                                                                    721
                                                                                                                                                                                                                                                                661
                                                                                                                                                                                                                                                                                                                                               601
                                                                                                                                                                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
KEYWORDS
SOURCE
S
                                       片
                                                                            Ś
                                                                                                                      밁
                                                                                                                                                           Ś
                                                                                                                                                                                                    片
                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                片
                                                                                                                                                                                                                                                                                                                                                                                                                                          맑
                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                           306
                                                                              301
                                                                                                                        246
                                                                                                                                                             241
                                                                                                                                                                                                      186
                                                                                                                                                                                                                                                                                   126
    361
                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                          753;
                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                      61 AGACACTCTGGACACCACTATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BG757089
BG757089.1
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                              σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
cDNA Library Preparation: Ling Hong/Rubin Laboratory
cDNA Library Arrayed by: The I.M.A.G.E. Consortium ()
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           602715124F1 NIH_MGC_48 Homo sapiens cDNA clone mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnlgov plate: LLCM1704 row: o column: 06 High quality sequence stop: 675.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae, 1 (bases 1 to 820)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens (human)
                                                                                                                                                       CTGCCACGTGGAATTGCTCTCCTCCGCTACATCTCGGACTGGGACCTAGACCCTGGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGAGAACCATCATTAATTGAAGTGAGATTTTTTCTGGCCTGAGACTTGCAGGGAGGCAAGA
                                                                                                                                                                                                                                            GAGGCGTGACAGTGCTACATCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGG
                                                                                                                                                                                                                                                                                                                                                                  AGACACTCTGGACACCACTATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCA
    GGCCGACTTTCTGCGAGGGAACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCTCTA
                                                                                CTGCTACCGCGTCACCTGGTTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGT
                                                                                                                        CTGCCACGTGGAATTGCTCTTCCTCCGCTACATCTCGGACTGGGACCTAGACCCTGGCCG
                                                                                                                                                                                                      GAGGCGTGACAGTGCTACATCCTTTTCACTGGACTTTTGGTTATCTTCGCAATAAGAACGG
                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          quality sequence stop: (
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /tissue_type="primary B-cells from tonsils (cell line)"
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_48"
/clone_lib="NIH_MGC_48"
/clone_lib="NIH_MGC_48"
/note="Organ: B-cells; Vector: pOTB7; Site_1: XhoI;
/site_2: EcoRI; cDNA made by oligo-dT priming.
Directionally cloned into BcoRI/XhoI sites using the
following 5: adaptor: GGCAGAGG(G). Size-selected >500bp
for average insert size 1.8kb. Library constructed by Ling
Hong in the laboratory of Gerald M. Rubin (University of
California, Berkeley) using ZAP-cDNA synthesis kit
(Stratagene) and Superscript II RT (Life Technologies).
Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      clone="IMAGE:4855517"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       . 820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 705.6; DB 12; Pred. No. 3.8e-82;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IMAGE: 4855517
```

ω -.

Gaps

180

185

240

245

300

305

420 365 360 120

65

60 ω '

125

RESULT 11 BG757089 LOCUS

밁 Ś 먉

밁 S 밁

Ş 멼 S 밁 S 닭 Ś 밁 S 밁 δ 밁 S 밁 Ś 밁 Ś 밁 S

δ

S

4

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 12
BG755526
                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             720
                                                                                                                                                                                                                                                                                                          found through the I.M.A.G.E. Cons
http://image.llnl.gov
Plate: LLCM1707 row: k column:
High quality sequence stop: 638.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Louis M. Staudt,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 820)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mRNA sequence.
BG755526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BG755526 820 bp m
602716206F1 NIH_MGC_48 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BG755526.1 GI:14066179
                                                                                                                                                                                                                                                                                                                                                                                               Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
CDNA Library Preparation: Ling Hong/Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTTCTGTGAGGACCGCAAGGCTGAGCCCGAGGGGCTGCGGCGGCTGCACCGCGCCCGGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCAAATAGCCATCATGACCTTCAAAGATTATTTTTACTGCTGGAATACTTTTTGTAGAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGCCGACTTTCTGCGAGGGAACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCCTCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAAGACAGGCGATAACAAACCAGACCTCAAAGTCAACACTGAAGACAGCCGTCAACGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAAGACAGTGGATAA-AAAACAGTCCTTCAAGTCTTCTTCTTTTTTATTCTTCAACTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACAGCTTCGGCGCATCCTTTTGCCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCATGAAAGAACTTTCAAAGCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTCTCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCAAATAGCCATCATGACCTTCAAAGATTATTTTTACTGCTGGAATACTTTTGTAGAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTTCTGTGAGGACCGCAAGGCTGAGCCCGAGGGCTGCGGCGGCTGCACCGCGCGGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TACTTTGGGACTTTGATAGCAACTTCCAGGAATGTCACACA-CGATGAAATATCTCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCATGAAAGAACTTTCAAAGCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTCTCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sapiens (human)
/tissue_type="primary B-cells from tonsils (cell line)"
/lab host="DHIOB (phage-resistant)"
/clome_lib="NHI_MGC_48"
/clome_lib="NHI_MGC_48"
/note="Organ: B-cells; Vector: pOTB7; Site_1: XhoI;
Site_2: ECORI, cDNA made by oligo-dT priming.
Directionally cloned into EcoRI/XhoI sites using the following 5' adaptor: GGCACGAG(G). Size-selected >500bp for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZBA-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies).
Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                        organism="Homo sapiens"
ool_type="mRNA"
                                                                                                                                                                                                                        clone="IMAGE:4856568"
                                                                                                                                                                                                                                       xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                    Consortium/LLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cDNA clone IMAGE:4856568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EST 15-MAY-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                σ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          605
                                     ACCESSION
VERSION
KEYWORDS
                                                                                                                                                RESULT 13
BF975096
                                                                                                                                                                                                                                                                                         맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                        片
                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                    문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 775; Conserv
     ORGANISM
                                                                                                                                                                                                                                                          1409
                                                                                                                                                                                                                                                                                                                              1349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1054
                                                                                                                                                                                                                                                                                                                                                                                                     1294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                           721
                                                                                                                                                                                                                                                                                                                                                                661
                                                                                                                                                                                                                                                                                                                                                                                                                                        601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 694
                                                                                                                                                                                                                          781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                     mRNA sequence.
BF975096
BF975096.1 GI
     Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N
                                                                                                       BF975096 693 bp n
602245679F1 NIH_MGC_48 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTGATAGCAACTTCCAGGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAATCATGCGCTGTATGTTTTAATCAGCAGAAGCATGTTTTTATGTTTGTACAAAAGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCAGAAGGTAGATCCTAAAAAGCATGGTGAGAGGGTCAAATGTTTTTATATCAACATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGTGCTGCAATTGGTGCAGTTTTGAATGCAACATTGTCCCCTACTGGGAATAACAGAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGACTCTTTAAAAAGATCTATGTCTTGAAAATAGAGAAGGAACACAGGTCTGGCCAGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCTCTGTTTTTATTCTTCAACTCTCACTTTCTTAGAGTTTTACAGAAAAAATATTTATATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAAAAAACAGTCCTTCAAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAAAAAACAGTCCTTCAAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGTTGATGACTTACGAGACGCATTTCGTAC-
                                                                                                                                                                                                                        GATGTCTGAAGTTAGCAAATCTCCTGGAAACGCCAAACCT
                                                                                                                                                                                                                                                  GATGTCTGAAG-TAGCAAATCTTCTGGAAACGCAAACTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCCTTGACGTTTACTTTCAAGTAACACAAACTCTTCCATCAGGCCATGATCTATAGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTTATTATTTGATTCATTTGAGTTAACAGTGGTGTTAGTGATAGATTTTTTCTATTCTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGACTCTTTAAAAAGATCTATGTCTTGAAAATAGAGAAGGAACACAGGTCTGGCCAGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCTCTGTTTTTATTCTTCAACTCTCACTTTCTTAGAGTTTACAGAAAAAATATTTATATA
                                                                                                                                                                                                                                                                                             TAATTAAAGGATCTCACAATGGGCACGAAGACTGTGAACCAGAAATTCTTAATAATGGGT
                                                                                                                                                                                                                                                                                                                            TTAATAAAGGATCTTAAAATGGGCAGGAGGACTGTGAACAAGACACCCCTAATAATGGGTT
                                                                                                                                                                                                                                                                                                                                                                 ATTGTTATGGGTGGGGATGGAGGTAT---AGACCATGCATGGTCACCTTCAAG--CTACT
                                                                                                                                                                                                                                                                                                                                                                                                                                        CAATCATGCGCTGTATGTTTTAATCAGCAGAAGCATGTTCCCATGTCCGTACAAAAGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCCTAATGAGAGTATCTGGGTGATTGTGACCCCAAACCATCTCTCCAAAGCATTAATATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITATTATTTGATTCATTTGAGTTÄÄCAGTGGTGTTÄGTGATAGATTTTTCTATTCTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGCAGAAGGTAGATCCTAAAAAGCATGGTGAGAGGATCAAATGTTTTTATATCAACATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGTGCTGCAATTGGTGCAGTTTTTGAATGCAACATTGTCCCCTACTGGGAATAACAGAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCTAATGAGAGTATCTGGGTGATTGTGACCCCAAACCATCTCTCCAAAGCATTAATATC
     sapiens
sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                           GI:12342311
                         (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25.0%;
94.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 705.2; DB 12;
Pred. No. 4.3e-82;
0; Mismatches 38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTGGGACTTTGATAGCAACTTCCAGGAAT
                                                                                                             mRNA linear EST 22-JAN-2001
s cDNA clone IMAGE:4336722 5',
                                                                                                                                                                                                                                                          1447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1173
                                                                                                                                                                                                                                                                                                                                1408
                                                                                                                                                                                                                                                                                                                                                                                                     1348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1053
                                                                                                                                                                                                                                                                                             780
                                                                                                                                                                                                                                                                                                                                                                 720
                                                                                                                                                                                                                                                                                                                                                                                                                                        660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
```

밁 Ś 밁 5 밁 Ś 뫄 5 밁 S 밁

FOCUS

```
REFERENCE
AUTHORS
TITLE
JOURNAL
  片
                                     S
                                                                               밁
                                                                                                                Ş
                                                                                                                                                            밁
                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 692;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                      664
                                                                                                                                                            301
                                                                                                                                                                                                   604
                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                   544
                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                               424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               304
    421
                                       724
                                                                               361
                                                                                                                                                                                                                                                                                                                                                                484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
CDNA Library Preparation: Ling Hong/Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 693)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Plate: LLCM1209 row: n column: 19
High quality sequence stop: 692.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished (1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
                                                                                                                                                                                                                                                                                 TGAAAGAACTTTCAAAGCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTCTCCAGACA 603
                                                                                                                                                                                                                                                                                                                                                              AATAGCCATCATGACCTTCAAAGATTATTTTTACTGCTGGAATACTTTTGTAGAAAACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGTGAGGACCGCAAGGCCTGAGGGGGCTGCGGCGGCTGCACCGCCGGGGGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGACTTTCTGCGAGGGAACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCTCTACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTACCGCGTCACCTGGTTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTACCGCGTCACCTGGTTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGTGGC
  ACAGTGGATAAAAAACAGTCCTTCAAGTCTTCTCTGTTTTTATTCTTCAACTCTCACTTT
                                                                                                                                                                                                   GCTTCGGCGCATCCTTTTGCCCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTAC
                                                                                                                                                                                                                                         TGAAAGAACTTTCAAAGCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTCTCCAGACA
                                                                                                                                                                                                                                                                                                                          AATAGCCATCATGACCTTCAAAGATTATTTTTACTGCTGGAATACTTTTTGTAGAAAACCA
                                                                                                                                                                                                                                                                                                                                                                                                     TTTGGGACTTTGATAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAG
                                                                                                                    TTTGGGACTTTGATAGCAACTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /tissue_type="primary B-cells from tonsils (cell line)"
/lab host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_48"
/clone_lib="NIH_MGC_48"
/note="Organ: B-cells; Vector: pOTB7; Site_1: XhoI;
Site_2: EcoRI; cDNA made by oligo-dT priming.
Directionally cloned into EcoRI/XhoI sites using the following 5' adaptor: GGCACGAG(G). Size selected >500bp for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies).
Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            )
[0]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        organism="Homo sapiens"
|mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  clone="IMAGE:4336722"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . 693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 681; DB 10;
Pred. No. 6.5e-79;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             693;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ö,
                                                                                                                                                                                                                                                                                                                                                                543
                                                                                                                                                                                                                                                                                                                                                                                                                                             . 483
                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                       180
480
                                       783
                                                                             420
                                                                                                                  723
                                                                                                                                                            360
                                                                                                                                                                                                   663
                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             363
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 14
BF975166
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
VERSION
밁
                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                      Matches
                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    found through the I.M.A.G.E. Consortium/LLNL http://image.llnl.gov
Plate: LLCM1207 row: a column: 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Louis M. Staudt,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 942)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BF975166 942 bp mRNA linear EST 22-U
602244657F1 NIH_MGC_48 Homo sapiens cDNA clone IMAGE:4335639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
CDNA Library Preparation: Ling Hong/Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BF975166.1
                             GAACCATCATTAATTGAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGGAGGCAAGAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATAGAGAAGGAACACAGGTCTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGTTTTTCTATGACTTTTAGGTAGGATGAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGTTTTTCTATGACTTTTAGGTAGGATGAGAGC 996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACATTGTCCCCTACTGGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATAGAGAAGGAACACAGGTCTGGCCAGGGACGTGCTGCAATTGGTGCAG-TTTGAATGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTTAGAGTTTACAGAAAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTTAGAGTTTACAGAAAAAATATTTTATATACGACTCTTTAAAAAAGATCTATGTCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACATTGTCCCCTACTGGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 quality sequence stop:
                                                                                      Conservative
                                                                                                                                                                                          /clone lib="NIH MGC 48"
/clone lib="NIH MGC 48"
/note="Organ: B-cells; Vector: pOTB7; Site_1: XhoI;
Site_2: EccRI; cDNA made by oligo-dT prining.
Directionally cloned into EccRI/XhoI sites using the following 5' adaptor: GGCACGAG(G). Size-selected >500bp for average insert size 1.8kb. Library constructed by Lir Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-CDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies).
Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                              /mol type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:4335639"
/clone="IMAGE:4335639"
/tissue_type="primary B-cells from tonsils (cell line)"
/lab_host="DH10B (phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           organism="Homo sapiens"
mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GI:12342381
                                                                                                        23.7%;
                                                                                      0
                                                                                                        Score 667.4; DB Pred. No. 3e-77;
                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     692
                                                                                                                               DB 10;
                                                                                      61;
                                                                                      Indels
                                                                                                                               Length 942;
                                                                                      15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EST 22-JAN-2001
                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            þ
6
                                           63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       659
                                                                                                                                                                                                                                                                                     Ling
```

Ş

CACTCTGGACACCACTATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAA-T

```
RESULT 15
BG754140
LOCUS
   REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                            SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                  $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ᅜ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                멼
                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                            KEYWORDS
                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                 831
                                                                                                                                                                                                                                                                                                                              842
                                                                                                                                                                                                                                                                                                                                                            774
                                                                                                                                                                                                                                                                                                                                                                                          782
                                                                                                                                                                                                                                                                                                                                                                                                                         718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       122
                                                                                                                                                                                                                                                                                                                                                                                                                                                         722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  82
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 664)

NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                              Homo
                                                                                                                                                       BG754140
BG754140.1 GI:14064793
                                                                                                                                                                                    mRNA sequence.
                                                                                                                                                                                                    602709681F1 NIH_MGC_48 Homo sapiens
                                                                                                                            OMO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGAAAGAACTTTCAAAAGCCTGGGAAGGGCTGCATGAAAATTCAGTTCCGTCTCCAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCTACCGCGTCACCTGGTTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CACTCTGGACACCACTATGGACAGCCTCTTGATGAACCGGAGGAAGTTTCTTTACCAAGT
                                                                                                                                                                                                                                                                                                                                                                                          TTCTTAGAGTTTACAGAAAAAATATTTATATACGACTCTTTAAAAAAGATCTATGTCTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGACAGTGGATAAAAAACAGTCCTTCAAGTCTTCTCTGTTTTTATTCTTCAACTCTCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACTT - - GGGACTTGATAGCAA - TTCCAGGAATGTCACACA - GATGAAATATCTCTGGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCTTCGGCGCATCCTTTGGGCCCTGTATGAGGGTTGATGACTTACGAGACGCATTTCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCTTCGGCGCATCCTTTTGCCCCTGTATGA-GGTTGATGACTTACGAGACGCATTTCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGARAGAACTTTCAAAGCCTGGGAAGGGGCTGCATGAAAATTCAGTTCGTCTCCAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAATAGCCATCATGACCTTCAAAGATTATTTTTACTGCTGGAATACTTTTTGTAGAAAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCTGTGAGGACCGCAAGGCTGAGCCCGAGGGGGCTGCGGCGGCTGCACCGAGCCGGGGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTACCGCGTCACCTGGTTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCCGACATGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCCACGTGGAATTGCTCTTCCTTCCGCTACATCTCGGACTGGGACCTAGACCCTGGCCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCCACGTGGAATTGCTCTTCCTCCGCTACATCTCGGACTGGGACCTAGACCCTGGCCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGCGTGACAGTGCTACATCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGCGTGACAGTGCTACATCCTTTTCACTGGACTTTGGTTATCTTCGCAATAAGAACGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AA - - TATGAAGGAACACGGGTTTGTGCAGGGAAGT
                                                                                                                                                                                                                                                                                                                              AAATAGAGAAGGAACACAGGTCTGGCCAGGGACGT
                                                                                                                                                                                                                                                                                                                                                              TTCTTTAAAGTTAAGGAAAA---ATTTTGATATTAGATCTTTAAAGAGTTTATGTTTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                         AGACGGTGGATAAAAAGAGGCCTTAAGTCTACACGGAAGAATTCTT----AAATTTCACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAATAGCCATCATGACCTTCAAAGATTATTTTTACTGCTGGAATACTTTTGTAGAAAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCGACTTTCTGCGAGGGAACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCTCTACT
                                                                                                            sapiens
                                                                                                                           sapiens (human)
                                                                                                                                                                                                                      ģ
                                                                                                                                                                                                                      mRNA
                                                                                                                                                                                                       cDNA clone
                                                                                                                                                                                                                                                                                                 863
                                                                                                                                                                                                                                                                                                                               876
                                                                                                                                                                                                                      linear
                                                                                                                                                                                                       IMAGE: 4846005
                                                                                                                                                                                                                    EST 15-MAY-2001
                                                                                                                                                                                                       ທຸ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    182
                                                                                                                                                                                                                                                                                                                                                                                          841
                                                                                                                                                                                                                                                                                                                                                                                                                                                       781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                            830
                                                                                                                                                                                                                                                                                                                                                                                                                         773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                         S
                                                       밁
                                                                                      Ś
                                                                                                                         문
                                                                                                                                                    Ś
                                                                                                                                                                                      맑
                                                                                                                                                                                                           8
                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                 1174
                                                                                              1114
                                                                                                                                                         1054
                                                                                                                            422
                                                                                                                                                                                       362
                                                                                                                                                                                                                                                   302
                                                                                                                                                                                                                                                                                                                                                                            182
                                                                                                                                                                                                                                                                                                                                                                                                                                         122
      542
                                                               482
                                                                                                                                                                                                                      994
                                                                                                                                                                                                                                                                                 934
                                                                                                                                                                                                                                                                                                                 242
                                                                                                                                                                                                                                                                                                                                               874
                                                                                                                                                                                                                                                                                                                                                                                                         814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              al Similarity
663; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
cDNA Library Preparation: Ling Hong/Rubin Laboratory
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
plate: LLCM1686 row: b column: 22
                                                                                                                                                                                                                                                                    GTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAAAAACAGTCCTTCAAGTCT
                                 TCCTAATGAGAGTATCTGGGTGATTGTGACCCCCAAACCATCTCTCCAAAGCATTAATATC
                                                                               CCCTTGACGTTTACTTTCAAGTAACACAAACTCTTCCATCAGGCCATGATCTATAGGACC
                                                                                                                                              TTTATTTATTTGATTTGAGTTAACAGTGGTGTTAGTGATAGATTTTTTCTATTTT
                                                                                                                                                                                                            AGCAGAAGGTAGATCCTAAAAAAGCATGGTGAGAGGGATCAAATGTTTTTATATCAACATCC
                                                                                                                                                                                                                                                    CGTGCTGCAATTGGTGCAGTTTTTGAATGCAACATTGTCCCCTACTGGGAATAACAGAACT
                                                                                                                                                                                                                                                                                                                                   CGTGCTGCAATTGGTGCAGTTTTGAATGCAACATTGTCCCCTACTGGGAATAACAGAACT
                                                                                                                                                                                                                                                                                                                                                                            CGACTCTTTAAAAAGATCTATGTCTTGAAAATAGAGAAGGAACACAGGTCTGGCCAGGGA
                                                                                                                                                                                                                                                                                                                                                                                                 CGACTCTTTAAAAAAGATCTATGTCTTGAAAAATAGAGAAGGAACACAGGTCTGGCCAGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                         TCTCTGTTTTTATTCTTCAACTCTCACTTTCTTAGAGTTTACAGAAAAAAATATTTATATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCTCTGTTTTTATTCTTCAACTCTCACTTTCTTAGAGTTTACAGAAAAAATATTTATATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAAAAAACAGTCCTTCAAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTGATAGCAACTTCCAGGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTGATAGCAACTTCCAGGAAT
                                                                                                                                                                                         AGCAGAAGGTAGATCCTAAAAAGCATGGTGAGAGGATCAAATGTTTTTATATCAACATCC
                                                                                                                            TTTATTATTTGATTCATTTGAGTTAACAGTGGTGTTAGTGATAGATTTTTCTATTCTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23.5%;
ilarity 100.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     quality sequence stop: 662.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /tissue_type="primary B-cells from tonsils (cell line)"
/lab_host="DHIOB (phage_resistant)"
/clone_lib="NIH_MGC_48"
/note="Organ: B-cells; Vector: pOTB7; Site_1: XhoI;
Site_2: EcoRI, cDNA made by oligo-dT priming.
Directionally cloned into EcoRI/XhoI sites using the
following 5' adaptor: GGCACAGG(G). Size-selected >500bp
for average insert size 1.8kb. Library constructed by Ling
Hong in the laboratory of Gerald M. Rubin (University of
California, Berkeley) using ZAP-cDNA synthesis kit
(Stratagene) and Superscript II RT (Life Technologies).
Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             clone="IMAGE:4846005"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 663; DB 12;
Pred. No. 1.4e-76;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            664;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ling
of
                                   1233
                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                              1173
                                                                                                                                                           1113
                                                                                                                                                                                                                       1053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
      601
                                                                 541
                                                                                                                              481
                                                                                                                                                                                         421
                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                    993
                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                               933
                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                            873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
```

O 0 S	문	δ.	밁	β
arch b tim				
Search completed: March 7, 2004, 11:56:02 Job time : 7092 secs	662 ATT 664	1294 ATT 1296	602 CAATCATGCGCTGTATGTT	1234 CAATCATGCGCTGTATGTS
1, 11:56:02			602 CAATCATGCGCTGTATGTTTTAATCAGCAGAAGCATGTTTTTATGTTTGTACAAAAGAAG 661	1234 CAATCATGCGCTGTATGTTTTAATCAGCAGAAGCATGTTTTTATGTTTTATACAAAAGAAG 1293

```
Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Word size :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Post-processing: Listing first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     seq length: 0 seq length: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OLIGO_NUC
Gapop_60.0 , Gapext 60.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-966-880A-7
2818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          March
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3470272 seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                              gb ba:
gb htg:
gb in:
gb on:
gb on:
gb pr:
gb pr:
gb pr:
gb sts:
gb sts:
gb sts:
gb vi:
gb vi:
em fun:
em fun:
em or:
em 
em htg pln: *
em htg pln: *
em htg pln: *
em htg rod: *
em htg van: *
em htg vrt: *
em htg vrt: *
em htgo hum: *
em htgo mus: *
em htgo other: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7, 2004, 11:59:52 ; Search time 10902 Seconds (without alignments) 11203:510 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21671516995 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>4</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      summaries
```

Pred. No. is the number of results predicted by chance to have

REFERENCE AUTHORS TITLE JOURNAL FEATURES

Unclassified.

(Dases 1 to 20)

(Cros,P., Kurfurst,R., Battail,N. and Piga,N. Process and device for assaying a hapten Patent: US 5849480-A 5 15-DEC-1998;

Location/Qualifiers

RESULT 1
AR064875/c
LOCUS
DEFINITION
ACCESSION
VERSION
VERSION
KEYWORDS

AR064875 Sequence 5 : AR064875

from patent US GI:5995091

20 bp 5849480.

DNA

linear

PAT

29-SEP-1999

ALIGNMENTS

SOURCE ORGANISM

AR064875.1 . Unknown. Unknown. score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

C 4444 1321	00 4433333 44098760	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	NNNNN	00000000000		Result
22222	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	22222222	222222	200000000000000000000000000000000000000		Score
0.77	000000		00000	000000000	0000000000000	% Query Match
NNNN 0000	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	NNNNNN 00000	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Length
თთთთთ	νοσοσοσ	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	თ თ თ თ თ თ	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	DB
AX440140 AX465311 AX465326 AX547087		4440004	AR343047 AR344936 AR365970 AR382312 AR429653 AX004876	1122022000	R0648 R0859 R0859 R1189 R11216 R1216 R1216 R1541 R1541	SUMMARIES
140 111 311 326 087	24 Sequenc 24 Sequenc 39 Sequenc 74 Sequenc 10 Sequenc 11 Sequenc	45779 Sequenc 45787 Sequenc 45790 Sequenc 04034 Sequenc 04364 Sequenc 04368 Sequenc 15919 Sequenc	936 936 970 312 312 653	38 Sequence 56 Sequence 33 Sequence 75 Sequence 94 Sequence 24 Sequence 25 Sequence 15 Sequence	Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc THTLY	Description

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                    KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                    LOCUS
DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                              RESULT 3
AR085926
                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
ACCESSION
VERSION
                                                                                                                            JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 2
밁
                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local s
Matches 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 20
                                         Query Match
Best Local S
Matches 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                             1799
                      1799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1799 АЛАЛАЛАЛАЛАЛАЛАЛАЛАЛ 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AR080000
Sequence 83
AR080000
                                                                                                                                                                                                                                                                                                                                                                                                                                         Patent: US 5968524-A 83 19-OCT-1999;
Patent Location/Qualifiers
                                                                                                                                               1 (bases 1 to 20)
Tan,P., Skinner,M. and Prestidge,R.
Compounds and methods for treatment and
infections
                                                                                                                                                                                                                                    AR085926
Sequence 83 from patent
AR085926
AR085926.1 GI:10012692
  Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 (bases 1 to 20)
Watson, J.D. and Tan, P.L.J.
Methods and compounds for the treatment
                                                                                                                                      Patent:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unknown
                                                                                                                                                                                                     Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AR080000.1
                                                    Similarity
                                                                                                                                                                                           Unclassified.
                                                                                                                                                                                                                Unknown.
                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                        AAAAAAAAAAAAAAAAAA 20
                                                                                                                                                                                                                                                                                                                                             АЛААЛААЛААЛАЛАЛАЛА 1818
                    АААААААААААААААА 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAAAAAAAAAAAAAAA 1
  АААААААААААААААА
                                                                                                                                                                                                                                                                                                                                                              0.7%; Score 20; DB ilarity 100.0%; Pred. No. 83 Conservative 0; Mismatches
                                        0.7%;
ilarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                            US 5985287-A 83 16-NOV-1999;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="unknown"
/mol_type="unassigned DNA"
                                                                                          /mol_type="unassigned DNA"
                                                                                                      organism="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                     /mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                              organism="unknown"
                                                                                                                   1. .20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GI:10006735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                from patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0.7%; Score 20;
100.0%; Pred. No.
/ative 0; Mismatc!
                                         ·,
                                                   Score 20;
Pred. No.
                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                         Mismatches
                                                                                                                                                                                                                                                         20 bp :
S 5985287.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20 bp 1
S 5968524.
                                                   DB 6;
83;
                                                                                                                                                                                                                                                                                                                                                                           DB 6;
83;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   83 ;
                                                                                                                                                                                                                                                                    DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ٠.
و
                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                         ,
,
                                                                                                                                                                                                                                                                                                                                                                                   Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   얁
                                                             Length
                                                                                                                                                           diagnosis
                                           Indels
                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  immunologically-mediated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                    linear
                                                                                                                                                            ę,
                                                                                                                                                                                                                                                                    PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PAT 31-AUG-2000
                                                                                                                                                           mycobacterial
                                                                                                                                                                                                                                                                                                                                                                 0:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                         ٥,
                                                                                                                                                                                                                                                                    07-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                         Gaps
                                         0
                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

```
REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
SOURCE
ORGANISM
                     REFERENCE
AUTHORS
                                                      KEYWORDS
SOURCE
ORGANISM
                                                                                                 LOCUS
DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 5
AR093312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 4
AR087520/c
LOCUS
DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                             밁
                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
                                                                                        VERSION
                                                                                                                                  RESULT 6
AR118970/c
                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                               FOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local :
                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                 1799 АЛАЛАЛАЛАЛАЛАЛАЛАЛА 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1799 ААЛАЛАЛАЛАЛАЛАЛАЛАЛ 1818
                                                                                     AR118970
Sequence 96
AR118970
AR118970.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20 AAAAAAAAAAAAAAAAA 1
                                                                                                                                                                                                                                                                                                                                                                                                                       AR093312
Sequence
AR093312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
AR087520
                                                                                                                                                                             _
                                                                                                                                                                                                                                                                                                           1 (bases 1 to 20)
Tan,P., Hiyama,J., Visser,E., Skinner,M.,
Mycobacterium vaccae antigens
Patent: US 600131-A 83 14-DEC-1999;
Location/Qualifiers
                                                                                                                                                                                                                        20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    l (bases 1 to 20)
Pitsch,S., Weiss,P.A. and Jenny,L.
Ribonucleoside-derivative and method
Patent: US 5986084-A 1 16-NOV-1999;
Location/Qualifiers
1 (bases 1 to 20)
Uchida, K., Uchida, T., Tanaka, Y., Matsuda, Y. and Kondo,
Antisense nucleic acid compound targeted to VEGF
Patent: US 6150092-A 96 21-NOV-2000;
                                                        Unknown
                                                                  Unknown.
                                                                                                                                                                                                                                                                                                                                                                     Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                Unknown
                                                                                                                                                                                                                                                                                                                                                                                          Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                              AR093312.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unclassified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AR087520.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AR087520
                                            Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                             AAAAAAAAAAAAAAAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0.7%; Score 20; ilarity 100.0%; Pred. No. Conservative 0; Mismatci
                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ↦
                                                                                                             96
                                                                                                                                                                                                                                                                                                                                                                                                                                     83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="unknown"
/mol_type="unassigned
                                                                                                                                                                                                                                                                            /mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                        organism="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             from
                                                                                                                                                                                                                                                                                                                                                                                                                                     from
                                                                                                                                                                                                                                                                                                                                                                                                                GI:10020062
                                                                                         GI:14100880
                                                                                                                                                                                                                                  0.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            patent US
                                                                                                                                                                                                                                                                                                                                                                                                                                    patent
                                                                                                            patent US
                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                   Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                     Sn
                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20 bp
5986084.
                                                                                                                                                                                                                                                                                                                                                                                                                                    20 bp
$ 6001361.
                                                                                                            20 bp
S 6150092.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           83;
                                                                                                                                                                                                                                   83 ;
                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA
                                                                                                                                                                                                                                              6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>..</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            for preparing the same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>,</u>
                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                               Scott, L.
                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                               and Prestidge, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAT
                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                °.
                                                                                                                         16-MAY-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          07-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

```
DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                      RESULT 8
AR123335
                                                                                                                                       REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                           SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
SOURCE
ORGANISM
밁
                   Ś
                                                                                                                                                                                                                                                                                                                 片
                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 7
AR121692
                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                        Query Match
Best Local S
Matches 20
                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local s
Matches 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                    1799
                                                                                                                                                                                                                                                                                                                               1799 АЛАЛАЛАЛАЛАЛАЛАЛА 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20 AAAAAAAAAAAAAAAA 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
AR121692
                                                                                                                          1 (bases 1 to 20)
Bruice, T.C. and Dev, A.P.
Bruce, T.C. and Dev, A.P.
Deoxynuclaic alkyl thiourea compounds and uses thereof
Patent: US 6169176-A 1 02-JAN-2001;
Location/Qualifiers
                                                                                                                                                                                            Unknown
                                                                                                                                                                                                                                                                                                                                                            20;
                                                                                                                                                                                                                                      Sequence 1 from patent
AR123335
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Patent:
                                                                                                                                                                                                        Unknown.
                                                                                                                                                                                                                             AR123335.1 GI:14108301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Visser, E.
                                                                                                                                                                                                                                                             AR123335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Compounds and methods for treatment and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AR121692.1 GI:14105268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AR121692
                                                   Similarity
                                                                                                                                                                                   Unclassified.
                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     intections
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                   ААЛААЛААЛАЛАЛААЛАА 1818
                                                                                                                                                                                                                                                                                                                 AAAAAAAAAAAAAAAA 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (bases 1 to
                                       0.7%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                          0.7%; So liarity 100.0%; I Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                               US 6160093-A 83 12-DEC-2000;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
1. .20
                                                                                           /organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                   1. .20
                                                                                                                                                                                                                                                                                                                                                                                                               /mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                         organism="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              from patent US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0.7%;
                                                   Score 20; DB 6; 
; Pred. No. 83;
                                                                                                                                                                                                                                                                                                                                                          Score 20; DB; Pred. No. 83; 0; Mismatches
                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>.</u>;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 20; DB Pred. No. 83; 0; Mismatches
                                                                                                                                                                                                                                                 SD
                                        Mismatches
                                                                                                                                                                                                                                                 20 bp
6169176.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6160093.
                                                                                                                                                                                                                                                                                                                                                                    83 ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    83
83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA
                                                                                                                                                                                                                                                             DNA
                                                                                                                                                                                                                                                                                                                                                                               6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>ი</u>
                                                                                                                                                                                                                                                                                                                                                           0
                                                            Length 20;
                                                                                                                                                                                                                                                                                                                                                                               Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              diagnosis of mycobacterial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 20;
                                        Indels
                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                            PAT 16-MAY-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAT 16-MAY-2001
                                       0;
                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                      Gaps
                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                       0
```

```
KEYWORDS
SOURCE
                                                                  DEFINITION
ACCESSION
                                                                                                  RESULT 11
AR164658
                                                                                                                                                                                                                                                                                                                                                                          SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 9
AR141070/c
LOCUS
DEFINITION
ACCESSION
                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 10
AR154115/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
SOURCE
                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                      VERSION
                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                            Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                             AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Loc
Matches
                                                                                                                                                                                                     Query Match
Best Local :
                      ORGANISM
                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                    1799 АЛАЛАЛАЛАЛАЛАЛАЛА 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1799 AAAAAAAAAAAAAAAAAA 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20
                                                                                                                                               20 AAAAAAAAAAAAAAAAA 1
                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
AR154115
Unknown.
Unclassified.
1 (bases 1 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
AR141070
                                                                 Sequence 13
AR164658
                                                                                                                                                                                                                                                                                                                1 (bases 1 to 20)

Huang Z. and Szostak, J.W.

Simple and efficient method to label using DNA polymerase and a synthetic
                                 Unknown.
                                                       AR164658.1
                                                                                       AR164658
                                                                                                                                                                                                                                                                                                                                                                        Unknown
                                                                                                                                                                                                                                                                                                                                                                                      Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                            AR154115.1
                                                                                                                                                                                                                                                                                                                                                                                                                                            AR154115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Compounds, processes and intermediates for synthesis of mixed backbone oligomeric compounds patent: US 6207819-A 1 27-MAR-2001;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 (bases 1 to 20)
Manoharan, M. and Maier, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AR141070.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AR141070
                                                                                                                                                                                                                                                                                                                                                               Unclassified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unknown
                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAAAAAAAAAAAAAAA 1
                                                                                                                                                                                                                                                                                                      Leotides
                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0.7%;
llarity 100.0%;
Conservative
                                                                                                                                                                                                                                                                     US 6238865-A 14 29-MAY-2001;
Location/Qualifiers
1...20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ب
                                                                                                                                                                                                                                                                                                                                                                                                                                14
                                                                                                                                                                                                                                              /organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1. .20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 organism="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           from patent US
                                                                           from patent US
                                                      GI:16237754
                                                                                                                                                                                                                                                                                                                                                                                                            GI:15122168
                                                                                                                                                                                                                                                                                                                                                                                                                                from patent US 6238865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GI:14483566
                                                                                                                                                                                                    0.7%; Score 20;
100.0%; Pred. No.
                                                                                                                                                                                          ۰,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 20; DB; Pred. No. 83; 0; Mismatches
                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20 bp
6207819.
                                                                           20 bp 1
6274321.
                                                                                                                                                                                                                                                                                                                                                                                                                                            20
                                                                                                                                                                                                     B3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         83
B
                                                                                       DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA
                                                                                                                                                                                                                <u>٠.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6
                                                                                                                                                                                                                                                                                                                and modify 3'-termini of RNA template with defined overhang
                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                               Length 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 20
                                                                                                                                                                                          Indels
                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                       PAT 17-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                            PAT 08-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT 16-JUN-2001
                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                          Gaps
                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>.</u>
```

REFERENCE

```
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                            RESULT 13
136180/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCUS
DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 12
E12676/c
                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  片
                                                                                                                 멼
                                                                                                                                        S
                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                    Query Match
Best Local S
Matches 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1799 АЛАЛАДАЛАЛАЛАЛАЛА 1818
                                                                                                                                            1799
                                                                                                                                                                                                                                                                                                SOYAKU GIJUTSÜ KENKYUSHO:KK
OS None
OC Artificial sequences.
PN JP 1997052898-A/10
PD 25-FEB-1997
PF 09-AUG-1995 JP 1995224600
PI MIZUGUCHI MASATSUGU, KURK
KOYANAGI YOSHIO,
PI YAMAMOTO NAOKI
PC COPIZ1/04/A6IKX1/70;
CC strandedness: Single;
CC topology: Linear;
CC hypothetical: No;
CC anti-sense: Yes;
PH Key Location
FH Key 1..20
FT source 1..20
FT source
                                                                                                                    20
             Sequence
136180
136180.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Blumberg,B.
High throughput functional screening of cDNAs
Patent: US 6274321-A 13 14-AUG-2001;
Location/Qualifiers
                                                                                                                                                                      20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 (bases 1 to 20)
Mizuguchi,M., Kurosaki,N., Makino,K., Kurosaki,N., Makino,K., Kunosaki,N., Makino,K., Kunizuguchi,M., ANTI-SEMSE OLIGONUCLEOTIDE
Patent: JP 1997052898-A 10 25-FEB-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JP 1997052898-A/10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20 bp DNA Anti-HTLV-1 antisense oligonucleotide. E12676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                  I36180
                                                                                                                                                                                  Similarity
                                                                                                                 AAAAAAAAAAAAAAAAAAAA
                                                                                                                                          АААААААААААААААА 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       assified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Artificial sequences.
JP 1997052898-A/10
25-FEB-1997
09-AUG-1995 JP 1995224606
                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                           MIZUGUCHI MASATSUGU, KUROSAKI NAOKO, MAKINO KEISUKE,
                                      16
                                                                                                                                                                                                                                                                                  /organism='Artificial sequences'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="unknown"
/mol_type="unassigned
                                                                                                                                                                                                                                 /organism="unidentified"
/mol_type="genomic DNA"
/db_xref="taxon:32644"
              GI:2086693
                                      from patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0.7%;
                                                                                                                                                                               100.0%;
                                                                                                                                                                   Score 20; DB; Pred. No. 83; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                score 20; DB;; Pred. No. 83; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                     20 bp
US 5605662.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Makino, K., Koyanagi, Y. and Yamamoto, N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA"
                                                                                                                                                                              .
83,
                                                  DNA
                                                                                                                                                                                             6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6
                                                                                                                                                                    <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>,,</u>
                                                                                                                                                                                             Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 20;
                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PAT 27-APR-1998
                                                    PAT 13-MAY-1997
                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                              PI
                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOCUS
DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
TITLE
                                          JOURNAL
FEATURES
                                                                                                                                VERSION
KEYWORDS
                                                                                                                                                                                     RESULT 15
AR222466
                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 14
AR213738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
ORGANISM
                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
ORIGIN
                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                      ACCESSION
                                                                                                                                                               DEFINITION
                                                                                                                                                                            POCUS
                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                       1799 AAAAAAAAAAAAAAAAAAA 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1799 АЛАЛАЛАЛАЛАЛАЛАЛАЛ 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20 AAAAAAAAAAAAAAAAAA 1
                                                                                                                                                      Sequence
AR222466
                                                                                                                                                                                                                                 \vdash
                                                                                                                                                                                                                                                                           20;
                                                                                                                                                                                                                                                                                                                                                       infections
Patent: US 6406704-A 83 18-JUN-2002;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
AR213738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 (bases 1 to 20)
Heller, M.J. and Tu, E.
Active programmable electronic devices
analysis and diagnostics
Patent: US 5605662-A 16 25-FEB-1997;
                                       1 (bases 1 to 20)

Kurz,M., Lohse,P. and Wagner,R.

Peptide acceptor ligation methods

Patent: US 6429300-A 26 06-AUG-2002;

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unknown.
                                                                                                           Unknown
                                                                                                                      Unknown
                                                                                                                                           AR222466.1
                                                                                                                                                                           AR222466
                                                                                                                                                                                                                                                                                                                                                                                                          1 (bases 1 to 20)
Tan, P., Visser, E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                              Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AR213738.1
                                                                                               Unclassified
                                                                                                                                                                                                                                                                                                                                                                                                  Compounds and methods
                                                                                                                                                                                                                                                                                                                                                                                                                                 Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AR213738
                                                                                                                                                                                                                                 AAAAAAAAAAAAAAAA 20
                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                               26 from patent US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="unknown"
/mol_type="unassigned
                                                                                                                                                                                                                                                                                                                              /organism="unknown"
/mol_type="genomic |
                   organism="unknown"
       mol_type="genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ocation/Qualifiers
                                 . 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . 20
                                                                                                                                           GI:23329997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GI:23311025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  from patent US
                                                                                                                                                                                                                                                                                      0.7%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0.7%;
                                                                                                                                                                                                                                                                                                                                                                                                 Prestidge,R. and Watson,J.D.

ods for treatment and diagnosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 20; ; Pred. No.
                                                                                                                                                                                                                                                                           <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                      Score 20;
Pred. No.
                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20 bp
S 6406704.
                                                                                                                                                               20 bp
3 6429300.
                                                                                                                                                                                                                                                                                                                                  DNA"
            DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA"
                                                                                                                                                                                                                                                                                      B3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         83
83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA
                                                                                                                                                                           DNA
                                                                                                                                                                                                                                                                                                6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ص
~.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    for
                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     molecular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                  of.
                                                                                                                                                                            PAT 26-SEP-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAT 25-SEP-2002
                                                                                                                                                                                                                                                                                                                                                                                                  mycobacterial
                                                                                                                                                                                                                                                                           ٥.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    biological
                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

Search completed: March 7, 2004, 18:09:10 Job time : 10905 secs	Db 1 AAAAAAAAAAAAAA 20	Matches

```
Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Run
                                                                                                                                                                                    Result
                                                                                                                                                                                                                                                                                                                                                                                       Word size :
                                                                                                                                                                                                                                                                                                                                                                                                     Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                              Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OM nucleic
                                                                                                                                                                                                                                                                                                                                    Post-processing: Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                        Total number of hits satisfying
   αααα
                                     O
                                                                                 ი
                                                                                               0000000
                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
   Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                  Score
                                                                                                                                                                                                                                                                                                                                                  seq length: 0 seq length: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1
   nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-966-880A-7
2818
                                                                                                                                                                                                                                                                                                                                                                                                                           OLIGO_NUC
                                                                                                                                                                             Match
                                                                                                                                                                                                                                                                                                                                                                                                    3373863 seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                   Gapop 60.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    March
                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                   N_Geneseq_29Jan04:*
                       000000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                        GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                                                                                                     geneseqn2003as:*
geneseqn2003bs:*
geneseqn2003cs:*
                                                                                                                                                                                                                                                                          geneseqn2002s:*
                                                                                                                                                                                                                                                                                               geneseqn2000s:*
                                                                                                                                                                                                                                                                                                       geneseqn1990s:*
                                                                                                                                                                                                                                                                                                              geneseqn1980s:*
                                                                                                                                                                                                                                                                                  geneseqn2001bs:*
                                                                                                                                                                                                                                                                                         geneseqn2001as:*
                                                                                                                                                                                                                                              geneseqn2004s:*
                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7, 2004, 11:56:07; Search time 1110 Seconds (without alignments) 10785.065 Million cell updates/sec
  멂
                                                                                                                                                                                                                                                                                                                                                                                                                   Gapext 60.0
                                                                                                                                                                                                                                                                                                                                                                                                    2124099041 residues
                                                                                                                                                                                                                                                                                                                                                                        chosen parameters:
                      AAA40449
AAA40448
AAA96372
AAZ35378
                                                   AAX27533
AAZ11326
                                                                        AAT86606
AAZ37736
 AAA50193
AAD14808
                                                                                                                           AAQ75596
                                                                                                                                          AAQ94205
               AAZ91117
                                                                  AAZ37737
                                                                                       AAV34591
                                                                                               AV85582
                                                                                                     AAT63649
                                                                                                                                                                                                   SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                        1690386
                                                          Aaz377:
Aax275:
                                                                                                                                                                             Description
               Aaz91117
                                                                                        Aav34591
                                                                                               Aav855
                                                                                                                                                       Aaq33554 Microsate
                                                                                                                                                              Aag25565 Dye-coupl
Intersper
Oligonucl
2'-Methox
Human gly
                                                                                                           Reverse t
T2 (synth
PCR prime
                                                                                                                                       Sequence
Alpha-ano
                                     Electoche
Electoche
                                                         Human mdm
Synthetic
                              Primer us
                                                                               Oligonucl
                                                                        Human mdm
                                                                                               LRP5
                                                                                                                                  Reverse
                                                                                       vaccae
                                                                                              PCR
```

N N N N N N N N N N N N N N N N N N N
000000000000000000000000000000000000000
222222222222222222222222222222222222222
4 4 4 4 4 4 4 4 4 4 4 4 4 4 6 10 10 10
AAK95176 AAC87230 AAC87241 AAS16402 AAS16997 AAF60896 AAF863428 AAF80891 AAF80891 AAF80891 AAF80891 AAF99427 AAF99427 AAF99427 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99431 AAF99
Aak95176 Human cDN Aac87238 Phosphoro Aac87230 Digoxigen Aac87241 Poly T ol Aas10402 DNA templ Aad16997 Capture p Aaf60896 Conjugate Aas63428 Oligonucl Aaf28841 Random ol Aaf80891 Human mdm Aaf80890 Human mdm Aaf99427 Immunosti Aaf99427 Immunosti Aaf99431 Immunosti Aaf99931 Immunosti Aah38246 SNP speci Aah38246 SNP speci Aah46465 Oligonucl Aah78547 Nucleotid Aaf28351 DNA oligo Aas01235 Reverse p Aas29506 Human mdm Aas29506 Human mdm

ALIGNMENTS

3'-amino modified oligonucleotide RNA; antisense strands; detection; ss. 90DE-04039488 91EP-00120935 /*tag= a /note= "3-amino modified" Location/Qualifiers Konrad R, BP. Mag 3

New dye-coupled modified nucleosides, nucleotides and oligo:nucleotides useful for synthesis of antisense DNA and RNA strands in presence of template, also for in=vivo and in=vitro detection of genetic material.

Example; Page 9; 17pp; German.

The sequence is an example of a dye coupled 3'-amino modified oligonucleotide, it can be used in the synthesis of DNA and RNA nucleosides, nucleotides and oligonucleotides and for the synthesis of opposite strands in the presence of a template strand and in fluorescence microscopic and macroscopic detection in vivo and in vitro of genetic material. It is labelled with a fluorescent dye. See also AAQ25566 and

SXS

20 BP; 0 A; 0 C; 0 G; 20 T; 0 U; 0 Other;

AAQ25567.

(Updated

9

25-MAR-2003 to

correct PN field.)

```
RESULT 2
AAQ33554/c
                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 20
                                                      Query Match
Best Local (
                                          Matches
                                                                                                                                 specification and indexed herein (see below). The sequences upstream and downstream of the microsatellite sequence were used to generate the required PCR primers for in vitro amplification of the corresp.

microsatellite (using the program OPTIPRIM). The microsatellites may be used to identify individuals, for parentage testing, and in the genetic mapping of economic trait loci, or genes involved the determinism of economically important traits esp. in cattle, to allow selective breeding. See also AAQ33501-34437. (Updated on 25-MAR-2003 to correct PN
                                                                                                                                                                                                                                            The sequence is that of a bovine microsatellite sequence obtd. by screening a library of bovine WboI DNA fragments of between 250 and 500 bp with an (AC)15 and a (TC)15 oligonucleotide probe. One out of 50 clones cross-hybridised. Assuming independent distribution of microsatellites and WboI sites, the frequency of (T6)n >9 microsatellites in the bovine genome is estimated at >100, 000. The sequence information for ca. 230 such bovine microsatellites is summarised in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  06-AUG-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PCR; selection; primers; genetic mapping; traits;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25-MAR-2003
02-FEB-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAQ33554 standard;
                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                       Table 7; Page 150; 517pp; English.
                                                                                                                                                                                                                                                                                                                                                                                    Polymorphic bovine DNA markers - used in genetic identification, gene mapping, and selective breeding.
                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1992-284684/34.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Georges M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15-JAN-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15-JAN-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO9213102-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Microsatellite
                                                                                                                         breeding. See
field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (GENM-) GENMARK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1799 ААЛАЛАЛАЛАЛАЛАЛАЛ 1818
               1799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20
                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
AAAAAAAAAAAAAAAAAA 1818
                                                                                               20
                                                                                              8P;
                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Massey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (revised)
(first en
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequence from clone AGLA247.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              91US-00642342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        92WO-US000340
                                                                                              0 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA; 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    entry)
                                                      100.0%;
                                                                                             0 C; 0 G; 20 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 amplification; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OPTIPRIM; breeding; cattle;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ВP
                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 20;
Pred. No.
                                                     Score 20;
Pred. No.
                                          Mismatches
                                                      1.5e+03
                                                                   DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.5e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 20;
                                                                  Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              parentage;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                          0
```

```
RESULT 3
AAQ58578
ID AAQ5
XX
AC AAQ5
XX
                                                                                                                       AAQ94205/c
ID AAQ942
XX
AC AAQ942
XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           맑
밁
                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                       XXX
                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 4
                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25-MAR-2003
21-AUG-1994
                                                                                                                                                                                                                                                                                                                                        a membrane which comprises using a receptor that uses salt bridgin, aromatic stacking, H bonding and chelation to recognise the nucleic deriv. AAQ56305, AAQ58577-86 are nucleic acid derivs used in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAQ58578;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel receptor; nucleic acid; transport; oligo; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAQ58578
                     Synthetic.
                                           Oligonucleotide ligand; steroid hormone; hapten; immunodetection; estradiol; alpha-anomer; ss.
                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                 Transport of nucleic acid derivs. across membranes - which use salt bridging, aromatic stacking, hydrogen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 1994-082846/10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Usman N,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13-AUG-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO9404194-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           receptor
                                                                            Alpha-anomeric oligonucleotide ligand 1803 for oestradiol hapten
                                                                                                  25-MAR-2003
24-AUG-1995
                                                                                                                                    AAQ94205;
                                                                                                                                                         AAQ94205
                                                                                                                                                                                                                                                                                                                             examples. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                               The inventors claim a method of transporting a nucleic acid membrane which comprises using a receptor that uses salt k
                                                                                                                                                                                                                                                                                                                                                                                                Example;
                                                                                                                                                                                                                                                                                                                                                                                                                         chelation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (MASI ) MASSACHUSETTS INST TECHNOLOGY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14-AUG-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   03-MAR-1994
                                                                                                                                                                                                                                        1799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20
                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                        20
                                                                                                                                                                                                                                     далалалалалалалала 1818
                                                                                                                                                                                                                                                                                                                                                                                               Table 1, page 38; 103pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    standard;
                                                                                                                                                         standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAAAAAAAAAAAAAAAA 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rebek J,
                                                                                                                                                                                                                                                                                                        BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     synthetic RNA oligo which is a target nucleotide for a novel
                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (revised)
(first en
                                                                                                 (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      92US-00930087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            93WO-US007603
                                                                                                                                                                                                                                                                                                        20 A; 0 C; 0 G; 0 T; 0 U; 0 Other;
                                                                                                                                                          DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RNA;
                                                                                                                                                                                                                                                                      0.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Þe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20
                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    48
                                                                                                                                                                                                                                                            Score 20; DB; Pred. No. 1.5
                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                  20
                                                                                                                                                                                                                                                                       DB 2; Lo
                                                                                                                                                                                                                                                                                                                                                                                                                                  hydrogen bonding and
                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                 Length 20;
                                                       immobilisation;
                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                              using new receptors
                                                                                                                                                                                                                                                              <u>.</u>
                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                            accros
                                                                                                                                                                                                                                                                                                                                                      acid
```

0,

Кeу

Location/Qualifiers

```
RESULT 5
AAQ75563/c
ID AAQ7555
XX
AC AAQ755
XX
DT 04-AUG
DX Revers
XX
Analys
XW Analys
XW aggreg
XX
XW aggreg
XX
XY
DF0630
XX
PD 01-NOV
XX
                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                             Best
                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                             Oligonucleotides (AAQ94201-Q94205) were synthesised for use as ligands. The ligands are covalently linked to a hapten (esp. a steroid hormone) to form a conjugate which is then immobilised on a solid support for interaction with antibodies against the hapten. Nucleic acid ligands are less likely to be recognised by the antibodies than are peptide ligands and nucleic acids are also less likely to undergo intramolecular organisation which interferes with accessibility of the hapten to the antibodies. For immunodiagnosis of oestradiol, the active hapten coestradiol-6-carboxymethoxime-N- hydroxysuctnimide ester was used.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Assay device for hapten or its specific antibodies - comprises support having competitive reagent immobilised via nucleic acid ligand to impr
                                     JP06303997-A.
                                                            Synthetic
              01-NOV-1994
                                                                                                                    Reverse transcription primer used in
                                                                                                                                           04-AUG-1995
                                                                                                                                                                                         AAQ75563 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 1; Page 10; 39pp; French.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cros
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      W09429723-A1
                                                                                  aggregate;
                                                                                               Analysis;
                                                                                                                                                                    AAQ75563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (CROS/)
(KURF/)
(BATT/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               22-DEC-1994.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             modified_base
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11-JUN-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10-JUN-1994;
                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                           1799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1995-036665/05
                                                                                                                                                                                                                                                    20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CROS
                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KURFURST R.
BATTAIL N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PIGA N.
                                                                                                                                                                                                                                                                                                                                                 20
                                                                                                                                                                                                                                                                                                                                                                       엺
                                                                                                                                                                                                                                                                          АЛАЛАЛАЛАЛАЛАЛАЛАЛ 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kurfurst R,
                                                                                             gene expression; reverse
                                                                                  restriction enzyme;
                                                                                                                                                                                                                                                                                                                                              BP; 0 A; 0 C; 0 G; 20 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                     25-MAR-2003 to correct
                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and accessibility.
                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        94WO-FR000689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  93FR-00007093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1. .21
/*tag=
/note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              in the alpha-anomer form"

20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag= a
/mod_base= OTHER
                                                                                                                                                                                         DNA;
                                                                                                                                                                                                                                                                                                            0.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Battail N,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "carries a group
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           b true glycosidic bonds between nucleotides are all
                                                                                                                                                                                         20
                                                                                                                                                                                           뫄
                                                                                                                                                                                                                                                                                                 <u>,,</u>
                                                                                                                                                                                                                                                                                                            Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Piga
                                                                                             transcription;
                                                                                                                                                                                                                                                                                                                                                                      PN field.)
                                                                                                                   cDNA analysis technique.
                                                                                                                                                                                                                                                                                                             1.5e+03;
                                                                                                                                                                                                                                                                                                                       DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             derived
                                                                                                                                                                                                                                                                                                                       Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ffrom aminopropanediol"
                                                                                             primer; cDNA;
                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                               <u>..</u>
                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     improve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                               0
```

```
RASSULT 6
AAQ755
XX
AAQ755
XX
AAQ755
XX
AAQ755
XX
AAQ755
XX
AAQ755
XX
AAQ1ys
AAQ1ys
XX
AAG1ys
XX
AAG1ys
XX
AAG1ys
XX
AAG1ys
AAG1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FXRXRXFFXXXXDDDDDDXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
A method for the analysis of cDNA comprises (a) preparing an aggregate of double-stranded cDNAs by using an aggregate of mRNAs and a plural type of labelled reverse transcription primers (GENESEQ files AQ75547-075798) and using the aggregate of mRNAs as the template for each reverse transcription primer; (b) digesting each of the prepared aggregates of the double-stranded cDNAs with restriction enzyme and; (c) electrophoresing the digested aggregate of cDNAs in seperate lanes. The method can be used to analyse gene expression rapidly and easily
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and using the aggregate of mRNAs as the template for each reverse transcription primer; (b) digesting each of the prepared aggregates the double-stranded cDNAs with restriction enzyme and; (c) electrophoresing the digested aggregate of cDNAs in seperate lanes. method can be used to analyse gene expression rapidly and easily
                                                                                                                                                                                                                                                                                               Analysis of cDNA and gene expression -
by digestion with restriction enzymes.
                                                                                                                                                                                                                                                                                                                                                                                WPI; 1995-018287/03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-NOV-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      aggregate;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Reverse transcription
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         04-AUG-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAQ75596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAQ75596 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                              Disclosure; Page 5; llpp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16-APR-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16-APR-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JP06303997-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Analysis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A method
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           double-stranded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Analysis of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16-APR-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 1995-018287/03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (NITE ) NIPPON TELEGRAPH & TELEPHONE CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16-APR-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   abelled
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     alysis of cDNA and gene expression - digestion with restriction enzymes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1796 СТСАЛАЛАЛАЛАЛАЛАЛАЛА 1815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     for the analysis of cDNA comprises (a) preparing an aggregate tranded cDNAs by using an aggregate of mRNAs and a plural type reverse transcription primers (GENESEQ files AAQ75547-Q75798)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTCAAAAAAAAAAAAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gene expression; reverse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    restriction enzyme; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BP; 1 A; 0 C; 2 G; 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Page 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEGRAPH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        93JP-00112515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               93JP-00112515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  primer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20
                                                                                                                                                                                                                                                                                                                                                                                                                                    Ŗ,
                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEPHONE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 20; pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     used in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            transcription; primer; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cDNA analysis technique.
                                                                                                                                                                                                                                                                                                                       Å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                γ̈
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.5e+03;
                                                                                                                                                                                                                                                                                                                       amplification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                amplification of mRNA followed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 20
                                                                                                                                                                                                                                                                                                                             of.
                                                                                                                                                                                                                                                                                                                             mRNA followed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of
f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0 Q
```

```
RASSULT 7
RAGSOLAT 7
RAQ904
XX
XX
AQ904
XX
AC AAQ904
XX
DT 08-JAN
XX
T2; HL
XW ss.
XX
Synthe
XX
Synthe
XX
FF misc_f
FF misc_f
FF 1
XX
New Se
DT 11-MAY
XX
XX
XX
XX
XX
New Se
CC Contai
CC synthe
CC fin the
CC fin the
CC contai
CC method
CC precis
CC contai
8
                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SS X
                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                          Best
                                                                                      Query Match
                                                                                                                                              The sequences represented by, AAQ90402-15 are synthetic DNA probes containing 5' amino termini. The sequences shown in AAQ90390-401 are synthetic DNA probes with 3' ribonucleoside termini. These sequences were specific for the polymorphisms of HLA gene dQa. The sequences were used in the device of the invention. This is a self-addressable electronic device (SABD) that can be used to carry out multi-step and multiplex reactions, such as nucleic acid hybridisations. The advantages of this method are that these reactions can be carried out with complete and precise electronic control, and that the rate, specificity and sensitivity of these reactions are greatly improved at micro-locations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                             New self-addressable electronic devices - used for multi-step and multiplex reactions such as DNA hybridisation(s), clinical diagnostics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAQ90405 standard;
                                                                                                                      Sequence 20
                                                                                                                                                                                                                                                                                                                    Example 1; Page 41; 86pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 1995-185870/24.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-NOV-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26-OCT-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11-MAY-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  W09512808-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       T2; HLA; dQa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   T2 (synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   08-JAN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (NANO-) NANOGEN INC
                                                                          Local
                                                                                                                                                                                                                                                                                                                                                   bio:polymer synthesis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2792 ТТGААЛАЛАЛАЛАЛАЛА 2811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20
 20
                                                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                          Similarity
                          АААААААААААААААА 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTGAAAAAAAAAAAAAA 1
                                                                                                                                                                                                                                                                                                                                                                                                                                               걸
                                                                                                                   BP; 0 A; 0 C; 0 G; 20 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BP; 2 A; 1 C; 0 G; 17 T; 0 U; 0 Other;
                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     self-addressable electronic device; SAED; hybridisation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA probe with 5'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        93US-00146504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      94WO-US012270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               amine"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0.7%;
                                                                          100.0%;
                                                                                      0.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ណ្ឌ ១
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                맭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              aminolink2 Thymine; allows binding to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 20;
; Pred. No.
                                                          ;
                                                                        Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     amino terminal #4)
                                                                                      DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1.5e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 2;
                                                                          1.5e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                          <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 20;
                                                                                      Length 20;
                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                          0
```

AAT63649/c
ID AAT63649;
XX AAT63649;
AC AAT63649;
XX O6-JUN-19;
XX XX AAT61-HTLV
XX AAT61-HTLV
XX AAT61-HTLV

standard;

DNA;

20

뫄

06-JUN-1997

(first

entry)

Anti-HTLV antisense reference oligonucleotide HT

당 S

Matches Query Match Best Local

20;

Conservative

0;

0

0

Gaps

0;

1844 GCTCACGCCTGTAATCCCAG 1863

GCTCACGCCTGTAATCCCAG

Local

Similarity

0.7%;

Score 20; DB 2; L Pred. No. 1.5e+03; Mismatches

Length 20 Indels

```
RESULT 8
AAT73704/c
 repeats) for detecting a mutation in the locus of chromosome 14 associated with a presentle form of Alzheimer's disease. Each of the probes hybridises with one of the two human chromosomal DNA segments cloned in the CEPH yeast artificial chromosome (YAC) library under the accession numbers VAC 934A3 identifiable by genetic marker D14S251) and VAC 854F5 (identifiable by genetic marker D14S76). The probes are useful for diagnosis of the form of Alzheimer's disease associated with chromosome 14 by a method comprising making a preparation of metaphase chromosomes from the patient's lymphoblastoid cells on a microscope slide, contacting the preparation under DNA hybridiset probes or with one of the probes and another probe that hybridised probes and their relative positions on a significant number of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAT73704 standard; DNA; 20
Sequence 20 BP; 4 A; 4 C; 8 G; 4 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAT73704;
                                 pairs or
                                                                                                                                                                                                                                                                                                                              Probes for diagnosing Alzheimer's disease - hybridising with chromosome 14 segments cloned in yeast artificial chromosome library.
                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1997-353201/33.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28-OCT-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PCR primer BK33; Alzheimer's disease; probe; diagnosis; fluorochrome; yeast artificial chromosome library; YAC; chromosome 14; presenile; s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PCR primer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                27-FEB-1998
                                                                                                                                                                                                                                                               PCR primers AAT73703-4 were used to prepare probes (containing
                                                                                                                                                                                                                                                                                                Example 1; Page 8; 21pp; French.
                                                                                                                                                                                                                                                                                                                                                                                                                 Weissenbach J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28-OCT-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                27-JUN-1997.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FR2742758-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                 (ASFR-) ASSOC
                                   chromosomes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                 FR CONTRE MYOPATHIES ASSOC LOI
                                                                                                                                                                                                                                                                                                                                                                                                                 Heilig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                94FR-00012941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  94FR-00012941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               prepare
                                                                                                                                                                                                                                                                                                                                                                                                                 æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             probes for diagnosing Alzheimer's disease.
                                                                                                                                                                                                                                                                 Alu
```

```
AAV85582/c
XX
AC
AAV855
XX
AC
AAV855
DT
10-FEB
XX
LRP5;
CW
LRP5;
KW
LRP5;
KW
LRP5;
KW
INSuli
KW
JOmmer
KW

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Oligonucleotides having a partial sequence consisting of at least 15 bases of AATG3641 (an antisense oligo complementary to a region of the tax gene which can inhibit human T-cell lymphotropic virus type 1 (HTLV-1) viral antigen expression) are claimed. In an example, six antisense oligos were designed, T1-T6 (AATG3650-55) and were compared to six oligos derived from other regions of HTLV-1, i.e. SJ1 (splice junction), P1 (p21), R1 (rex), RR1 (rex response element), E1 (env) and G1 (gag), four reference oligonucleotides TIS (tax-sense), HC (dC20), HT (dT20) (AATG3647-49) and a random 20mer (RAN) in a HTLV-1 virus antigen expression inhibiting test. Oligonucleotide T1 gave the best results
                                15-APR-1997;
05-JUN-1997;
                                                                                                                                                                                                                                                                                                                   Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                         LRP5; LDL-receptor related protein; LRP-3; IDDM; diagnosis; endocytosis; insulin dependent diabetes mellitus; autoimmune disease; glomerulonephritis; inflammation; viral infection; osteoporosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10-FEB-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAV85582;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 20
                                                                                                                                                                         22-OCT-1998
                                                                                                                                                                                                                                 WO9846743-A1
                                                                                                                                                                                                                                                                                                                                                                          hypercholesterolemia; Alzheimer's
PCR primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LRP5 PCR primer GpI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAV85582 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 1; Page 8; 10pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Anti-HTLV-1 anti-sense oligo:nucleotide - is complementary to region of tax gene from human T-cell lymphotropic virus type 1 and inhibits viral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               09-AUG-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JP09052898-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic.
                                                                                                                  15-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          09-AUG-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 antisense; complementary; tax gene; inhibit; HTLV-1; human T-cell lymphotropic virus type 1; viral antigen expression;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (SOYA-) SOYAKU GIJUTSU KENKYUSHO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                                                                                                       primer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1799 АЛАЛАЛАЛАЛАЛАЛАЛАЛА 1818
                                                                                                                                                                                                                                                                                  sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAAAAAAAAAAAAAA 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BP; 0 A; 0 C; 0 G; 20 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                97US-0043553P
97US-0048740P
                                                                                                                  98WO-GB001102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       95JP-00224606.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            95JP-00224606.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; +-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ВÞ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 20;
; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                  disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 2; Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1.5e+03;
                                                                                                                                                                                                                                                                                                                                                                                            low density lipoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
밁
                              8
                                                                                                                                                 Query Match
Best Local S
Matches 20
                                                                                                                                                                                                                                                     receptor related protein, previously designated LRP-3). AAV8552 to AAV85586 represent PCR primer used for obtaining LRP5 cDNA. Nucleic acid molecules (NAMs) encoding LRP5 can be used for determining if an individual is susceptible to insulin dependent diabetes mellitus (IDDM). The NAMs or proteins can be used for reducing triglyceride levels in the serum of an individual. Therapies that affect LRP5 may also be useful in the treatment of autoimmune diseases such as glomerulonephritis, diseases and disorders involving disruption of endocytosis and/or antigen presentation, cytokine clearance and/or inflammation, viral infection,
                                                                                                                                               Sequence 20
                                                                                                                                                                                                 pathogenic bacterial toxin contamination, elevation of free fatty acids or hypercholesterolemia, type 2 diabetes, osteoporosis, Alzheimer's disease and cardiovascular disease. Products from the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New isolated LDL-receptor related protein - used to develop products treating, e.g. elevated triglyceride levels, diabetes, autoimmune disorders, inflammation or Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Todd JA, Hess JW, Caskey CT, Hey P, Kawaguchi Y, Merriman Phillips MS, Twells RCJ;
                                                                                                                                                                                can also be used for detection, diagnosis and drug screening
                                                                                                                                                                                                                                                                                                                                                                                                                       The present invention describes LRP5 (low density lipoprotein (LDL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 12; Page 98; 200pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1998-594573/50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (WELL ) WELLCOME TRUST LTD (MERI ) MERCK & CO INC.
                                1901 CAGGAGTTTGAGACCAGCCT 1920
20
                                                                      l Similarity
20; Conserv
                                                                                                                                               BP; 4 A; 6 C; 5 G;
                                                                      Conservative
                                                                                      0.7%;
                                                                      0
                                                                                      Score 20; Pred. No.
                                                                                                                                               5 T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cox RD, Gerhold TR, Metzker ML,
                                                                      Mismatches
                                                                                                                                               U; 0 Other;
                                                                                      DB 2; Lo
                                                                                                       Length 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 l D, Hammo
Nakagawa
                                                                    0
                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        for
```

```
ID AAV34591

ID AAV34591

XX AC AAV3

XX AC AAV3

XX M. v

XX M. v
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 11
                                                                                                                         Tan P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           M. vaccae
                                                                                                                                                                                                                                                                                   29-AUG-1996;
12-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        05-MAR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mycobacterium vaccae; antigen; therapy; prevention; cytokine production; M. tuberculosis; immune response enhancer; cell proliferation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAV34591 standard; DNA; 20 BP
                                                                                                                                                                                                                                                                                                                                                                                                             28-AUG-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO9808542-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mycobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mycobacteria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25-AUG-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAV34591
                                                                                                                                                                                                        (GENE-)
                                                                                                                         Hiyama
                                                                                                                                                                                                        GENESIS RES & DEV CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           antigenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        infection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                     Ç
                                                                                                                                                                                                                                                                               96US-00705347.
97US-00873970.
                                                                                                                                                                                                                                                                                                                                                                                                        97WO-NZ000105.
                                                                                                                     Visser E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sequence hybridising oligo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            vaccine;
                                                                                                                     Skinner MA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            88
                                                                                                                Scott LM,
```

Prestidge RL

Mycobacterium vaccae detection, therapy ar

ium vaccae polypeptides - u

used to develop products for use f mycobacteria infections or as in

immune ij

```
RESULT 12
AAT86606/c
     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mycobacterium vaccae antigens. The invention provides M. vaccae polygeptides that comprise an immunogenic portion of a soluble M. vaccae antigen, or a variant, where the antigen induces an immune response in patients previously exposed to a mycobacterium. Such M. vaccae polygeptides can be used in methods for enhancing non-specific immune response. The methods and products can be used for the detection, response. The methods and products can be used for the detection, such as M. vaccae, M. avium or M. tuberculosis. The products also have the ability to induce cell proliferation and cytokine production (e.g. interferon-gamma and interference production) in T cells, NK cells, so macrophages. They can be used for enhancing immune responses for use in vaccines or immunotherapy of infectious diseases and cancers
process using capillary affinity gel electrophoresis. The invention relates to selective separation of electrically charged target molecule in an analytical mixture. It comprises capillary affinity gel electrophoresis using a capillary tube which is at least partly filled with a polymer gel. Receptors for target molecules are covalently bound to the polymer. An electric field of at least 50 volts/cm is applied. T
                                                                                                               A mixture of oligonucleotides (AAT86604-7) were separated by a
                                                                                                                                                                                                       Separation of electrically charged target molecules - by capillary affinity gel electrophoresis using polymer-gel to which receptors for
                                                                                                                                                                                                                                                                                                                                                                                                                23-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       04-DEC-1997.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Capillary afinity gel electrophoresis; separation; polymer-gel;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Oligonucleotide separated by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            04-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAT86606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAT86606 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 8; Page 99; 153pp; English
                                                                                                                                                 Example D3; Page 25; 41pp; English.
                                                                                                                                                                                        affinity gel electrophoresis using target molecules are bound.
                                                                                                                                                                                                                                                                WPI; 1998-041763/04
                                                                                                                                                                                                                                                                                                                                                                              24-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO9745721-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                polyacrylamide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 H
                                                                                                                                                                                                                                                                                                   Þ
                                                                                                                                                                                                                                                                                                                                         NOVARTIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAAAAAAAAAAAAAAAAA 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       enhancers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAAAAAAAAAAAAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B₽;
                                                                                                                                                                                                                                                                                                   Paulus A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                              96CH-00001320
                                                                                                                                                                                                                                                                                                                                                                                                                97WO-EP002647.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20 A; 0 C; 0 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            is used in the DNA cloning strategies of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0.7%;
                                                                                                                                                                                                                                                                                                     Natt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     쁌
                                                                                                                                                                                                                                                                                                     'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    capillary affinity gel electrophoresis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .5e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                            molecules
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
 bound
ied. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

hyperproliferative

The

antisense

is used to

닭 Ś

```
ARZ37736
ID AAZ37
XX Humar
XX 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     capillary tube is charged with the analytical mixture. In a first separation stage, the target molecules in the mixture are bound to the receptors and the remaining components are eluted, optionally whilst splitting open. In a second stage, the elution conditions are changed, optionally in stages, so that the affinity of the target molecules for the receptor is eliminated and the target molecules are eluted and detected, optionally whilst splitting open. The process is useful for selective separation and/or determination of charged organic compounds, such as oligonucleotides, peptides or carbohydrates. It may be used, e.g. for isolation of specific proteins and DNA molecules, purification of cantibodies, analysis of antisense compounds or screening for enzyme inhibitors. The process achieves higher resolution and selectivity than prior art processes, especially in the case of complex biological analytical mixtures. It has high sensitivity, even with small amounts of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                  AAZ37473-Z37738 represent human mdm2 phosphorothioate oligonuclectides. AAZ37471, AAZ37472, AAZ37739, AAZ37740 and AAZ37741 are used in the exemplification of the present invention. The present invention describes novel nucleotide antisense compounds, translated to the 5' untranslated, translation termination codon, or 3' untranslated region of a nucleic acid encoding human mdm2, that modulates expression of human mdm2. The oligonuclectides mediate their effect by antisense inhibition of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          07-JAN-2000
                                                                                                                                                                                                                                                                                                                        New antisense compounds used to treat
                                                                                                                                                                                                                                                                                                                                                                                                                                           Miraglia LJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO9949065-Al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      restenosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  hyperproliferation;
lung cancer; soft t:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              antisense;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human mdm2 gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human mdm2 phosphorothioate oligodeoxynucleotide #266.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAZ37736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 standard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (ISIS-) ISIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1799
                                                                                                                                                                                                                                                                                                                                                                                 1999-610754/52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             les.
                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        АЛЛАЛАЛАЛАЛАЛАЛАЛА 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 methods
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAAAAAAAAAAAAAAAA 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The derivatised polymers may be synthesised specifically using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gene; proliferation; tumour; phosphorothicate; pb3; camer; modulation; oligonuclectide; expression; inhibition; feration; blood cancer; brain cancer; breast cancer; cancer; soft tissue cancer; psoriasis; fibrosis; atherosclerosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BP; 0 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                        Nero P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98US-00048810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99WO-US006702
                                                                                                                                                                                                                                                                 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA;
                                                                                                                                                                                                                                                           157pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0 C; 0 G; 20 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                              Graham MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20
                                                                                                                                                                                                                                                              English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                        Monia BP,
                                                                                                                                                                                                                                                                                                                        eg.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1.5e+03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 2;
                                                                                                                                                                                                                                                                                                                        hyperproliferative conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                                              Cowsert LM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>.</u>.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
ន្តន្តន្តន្ត្
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
Query Match
Best Local S
Matches 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 20
                                                                            AAZ37473-Z37738 represent human mdm2 phosphorothioate oligonucleotides. AAZ37471, AAZ37472, AAZ37739, AAZ37740 and AAZ37741 are used in the exemplification of the present invention. The present invention describes novel nucleotide antisense compounds, targetted to the 5' untranslated, translation termination codon, or 3' untranslated region of a nucleic acid encoding human mdm2, that modulates expression of human mdm2. The oligonucleotides mediate their effect by antisense inhibition of hyperproliferative gene expression. The antisense compound is used to treat an animal having a disease or condition associated with mdm2, particularly a hyperproliferative condition, more particularly cancer, especially of the blood, brain, breast, lung or soft tissue, or psecially, fibrosis, atherosclerosis or restenosis
                                                        Sequence
                                                                                                                                                                                                                                                                          Example 9; Page 55; 157pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAZ37737 standard; DNA; 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                treat an animal having a disease or condition associated with mdm2, particularly a hyperproliferative condition, more particularly cancer, especially of the blood, brain, breast, lung or soft tissue, or psoriasis, fibrosis, atherosclerosis or restenosis
                                                                                                                                                                                                                                                                                                         New antisense compounds used to treat
                                                                                                                                                                                                                                                                                                                                                                 Miraglia LJ,
                                                                                                                                                                                                                                                                                                                                                                                                                         26-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      26-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO9949065-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human mdm2 gene; proliferation; tumour; phosphorothicate; p53; antisense; modulation; oligonuclectide; expression; inhibition;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human mdm2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       07-JAN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   hyperproliferation; blood cancer; lung cancer; soft tissue cancer;
                                                                                                                                                                                                                                                                                                                                                                                                SISI (-SISI)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       restenosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20;
                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCCAGCACTTTGGGAGGCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCCCAGCACTTTGGGAGGCC 1877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         phosphorothicate oligodeoxymucleotide #267.
                                                          BP; 4 A; 7 C; 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BP; 3 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                 Nero P,
                                                                                                                                                                                                                                                                                                                                                                                                                         98US-00048810.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      99WO-US006702.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 blood
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7 C; 6 G; 4 T; 0 U; 0 Other;
             100.0%;
              0.7%; Score 20;
100.0%; Pred. No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              oligonucleotide; expressi
                                                                                                                                                                                                                                                                                                                                                                 Graham MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뫄
                                                          G; 6 T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                 Monia BP,
                No.
                                                          U; 0
                                                                                                                                                                                                                                                                                                      eg.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 2;
                            DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.5e+03;
              1.5e+03;
                                                                                                                                                                                                                                                                                                      hyperproliferative conditions
                                                          Other;
                                                                                                                                                                                                                                                                                                                                                                 Cowsert LM,
                            Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              breast cancer,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
RESULT 15
AAX275:33/c
ID AAX275:
XX AAX275:
XX AX275:
XX Synthe
XX Silylo
KW Silylo
KW Cyanoe
OS Synthe
XX W09909
XX 25-FEB
XX W19909
PD 25-FEB
XX (PITS/
PA (FITS/
PA (WEIS/
PA (JENN/
XX PT oligon
XX Pitsch
XX Pitsch
XX Pitsch
XX Pitsch
XX Pitsch
XX Pitsch
XX WPI; 1
XX Pitsch
XX WPI; 1
XX Pitsch
XX Pitsch
XX WPI; 1
XX Pitsch
XX WPI; 1
XX Pitsch
XX CC Interior
CC Interior
CC Simpli
CC Simpli
CC Fitsch
CC
밁
                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                   The invention relates to silyloxymethyl protected D- or L-ribonucleosides CC and their phosphonates (I), and silyloxymethyl halides (II). (I) are intermediates for synthesis of RNA-oligonucleotides with predetermined nucleotide sequence, particularly by machine synthesis. The groups created bequence, particularly by machine synthesis. The groups created above, apart from those on silyl, are those particularly for the cyanoethyl phosphoramidate coupling. Uses of the oligoribonucleotide products in diagnosis, therapy, and as research tools, are well known, and are not dealt with in detail. (II) is an intermediate for (I). The silyloxymethyl halide reagent is easy to prepare, and yields are high. Introduction of the silyloxymethyl group into the ribonucleoside is simple and rapid, and the acetal bond formed does not migrate, climinating particularly the prior art problem of 2' to 3' isomerisation. The methylenedioxy group spacer between the silyl group and nucleoside cring results in less steric hindrance than bulky direct silyloxy coupling. Purer products are therefore obtained than in prior art, coupling. Purer products are therefore obtained than in prior art, cenabling larger quantities and longer chains of oligoribonucleotides to be synthesised successfully, and in shorter times
                                                                                                                            Matches
                                                                                                                                                          Query Match
Best Local :
                                                                                                                                                                                                                                                  Sequence 20 BP; 0 A; 0 C; 0 G; 0 T; 20 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2-Silyloxymethyl ribonucleosides and their phosphonate derivatives - have high purity, use in machine synthesis of ribonucleic acids, enable longer oligonucleotide chain construction, and larger amounts.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Example 6; Page 25; 38pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1999-180963/15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pitsch S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (PITS/) PITSCH S. (WEIS/) WEISS P A. (JENN/) JENNY L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO9909044-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cyanoethyl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Silyloxymethyl;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic RNA sequence produced by the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAX27533;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAX27533 standard; RNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18-AUG-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25-FEB-1999
                                                                                                                                                      Local
                                                       1799 АЛАЛАЛАЛАЛАЛАЛАЛАЛА 1818
20
                                                                                                                         20;
                                                                                                                                                          Similarity
AAAAAAAAAAAAAAAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCTGTAATCCCAGCACTTTG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Weiss PA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 chyl; phosphonate; silyloxymethyl halide;
phosphoramidate coupling; isomerisation;
                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             97CH-00001931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98WO-EP005215
                                                                                                                                                   0.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Jenny
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20
                                                                                                                      0
                                                                                                                                                      Score 20; 
; Pred. No
                                                                                                                            Mismatches
                                                                                                                                                             ŏ.
                                                                                                                                                                                       DB 2;
                                                                                                                                                      1.5e+03
                                                                                                                                                                                 Length 20
                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 diagnosis;
steric him
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    hindrance.
                                                                                                                         0
                                                                                                                         Gaps
```

1851 CCTGTAATCCCAGCACTTTG

Conservative

0

Mismatches

0

Indels

<u>.</u>.

Job time : 1113 secs

55, Appl 55, Appl 55, Appl 55, Appl 55, Appl 55, Appl 56, Appl 10, Appl 10, Appl 10, Appl 10, Appl 10, Appl 11, Appl 12, Appl 12, Appl 13, Appl 14, Appl 15, Appl 16, Appl 17, Appl 18, Appl 19, Appl 19,

```
Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                        Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OM nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Post-processing: Listing first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Total number of hits satisfying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Word size
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BB BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         seq length: 0
seq length: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1
       nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Issued_Patents_NA:*
1: /cgm2_6/ptodata/2,
2: /cgm2_6/ptodata/2,
3: /cgm2_6/ptodata/2,
4: /cgm2_6/ptodata/2,
5: /cgm2_6/ptodata/2,
6: /cgm2_6/ptodata/2,
                                                                                                                                                                                                                                                                                                                                            Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                March 7, 2004, 14:32:38; Search time 216 Seconds (without alignments) 7240.054 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OLIGO NUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-966-880A-7
2818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           682709 seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gapop 60.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
        000000000000000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                 /cgn2_6/ptodata/2/ina/5A_COMB.seq:*
/cgn2_6/ptodata/2/ina/5B_COMB.seq:*
/cgn2_6/ptodata/2/ina/6A_COMB.seq:*
/cgn2_6/ptodata/2/ina/6B_COMB.seq:*
/cgn2_6/ptodata/2/ina/BTUS_COMB.seq:*
/cgn2_6/ptodata/2/ina/backfiles1.seq:*
                                                                                                                                                                                                                                                                                                                                            Length
       GenCore version 5.1.6 (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            277475446 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gapext 60.0
                                                                                                                                                                                                                                                                                                                                            멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   45 summaries
   US-08-146-504-16
US-08-379-593-5
US-08-379-593-5
US-08-997-080-83
US-08-997-362-83
US-08-965-780-1
US-08-8765-340-96
US-09-29-407-675-1
US-09-280-805-266
US-09-280-805-266
US-09-280-805-266
US-09-280-805-266
US-09-280-805-267
US-09-280-805-267
US-09-280-805-267
US-09-280-805-267
US-09-280-805-267
US-09-280-805-267
US-09-280-805-267
US-09-280-852-267
US-09-173-9368-1
US-09-173-9348-82
US-09-736-958A-5
US-09-736-978A-58
US-09-976-978A-58
US-09-976-978A-58
US-09-976-978A-58
US-09-976-998A-58
US-09-976-998A-58
US-09-976-998A-58
US-09-976-998A-58
US-09-976-998A-58
US-09-976-998A-58
US-09-976-998A-58
US-09-976-998A-58
US-09-402-923A-78
US-09-402-923A-78
US-09-402-923A-78
US-09-402-923A-78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             chosen
                                                                                                                                                                                                                                                                                                                                                                                SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             parameters:
Sequence 16, Appli
Sequence 5, Appli
Sequence 83, Appl
Sequence 83, Appl
Sequence 1, Appli
Sequence 1, Appli
Sequence 83, Appl
Sequence 83, Appl
Sequence 1, Appli
Sequence 266, App
Sequence 267, Appl
Sequence 1, Appli
Sequence 1, Appli
Sequence 11, Appl
Sequence 13, Appl
Sequence 13, Appl
Sequence 83, Appl
Sequence 83, Appl
Sequence 83, Appl
Sequence 83, Appl
Sequence 26, Appli
Sequence 55, Appl
Sequence 55, Appl
Sequence 55, Appl
Sequence 55, Appl
Sequence 78, Appl
Sequence 78, Appl
Sequence 78, Appl
Sequence 78, Appl
Sequence 70, Appl
Sequence 70, Appl
Sequence 70, Appl
                                                                                                                                                                                                                                                                                                                                           Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 16, Application US/08146504
Patent No. 5605662
GENERAL INFORMATION:
APPLICANT: Heller, Michael J.; and
TITLE OF INVENTION: SELF-ADDRESSAB;
TITLE OF INVENTION: MICROELECTRONI
TITLE OF INVENTION: MOLECULAR BIOLA
TITLE OF INVENTION: DIAGNOSTICS
                                      US-08-146-504-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 1
US-08-146-504-16/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       . . . . . . . . . . . . . . .
   Query Match
Best Local Similarity
                                                                          TELEX: 67-3510
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 20
LENGTH: 20
                                                                                                                                                                                                                    FILING DATE: NO. 56056
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
COMPUTER: IBM compatible
OPERATING SYSTEM: IBM P.C. DOS (Version 5.0)
SOFTWARE: WordPerfect (Version 5.1)
CURRENT APPLICATION DATA:
CURRENT APPLICATION DATA:
                                                                                                                                            NAME: Warburg, Richard J.
REGISTRATION NUMBER: 32,327
REFERENCE/DOCKST NUMBER: 20:
TELECOMMUNICATION INFORMATION:
TELEBHONE: (213) 489-1600
                                                                                                                                                                                                                                                                                                                                                                                                    STREET: 611 ...
CITY: LOS Angeles
CTATE: California
                                                                                                                                                                                                          ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES:
                                                   TOPOLOGY:
                                                             STRANDEDNESS:
                                                                                                                                  TELEFAX:
                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                        90017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11111111111222222
                                                                        nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                      611 West Sixth
                                                                                                                                 (213) 955-0440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       00000000000000000
                                                  S: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Lyon & Lyon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Michael J.; and Tu, Eugene
SELF-ADDRESSABLE SELF-ASSEMBLING
MICROELECTRONIC SYSTEMS AND DEVICES
MOLECULAR BIOLOGICAL ANALYSIS AND
DIAGNOSTICS
   0.7%;
                                                                                                                                                                                                                                                                                         5605662ember 1, 1993
                                                                                                                                                                                                                                                                                                      US/08/146,504
                                                                                                                                                                                                                                             including application described below:
                                                                                                            16
                                                                                                                                                                                                                                                                                                                                                                                                                                       Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-961-949A-55
US-09-966-312-55
US-09-956-312-55
US-09-966-312-55
US-09-975-062A-55
US-09-976-971A-55
PCT-US93-07603-6
US-08-629-939-10
US-08-759-873-10
US-08-271-882B-16
US-08-271-882B-16
US-08-271-882B-16
US-09-234-237-1
US-09-016-520-23
US-09-016-520-23
US-09-016-520-23
                                                                                                                                                                      203/218
   Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ALIGNMENTS
   DB 1; L;
1.1e+02;
              Length 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
```

0 0 0 0

იი

იი

none

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-379-593-5/c
                                                                                                                                                      US-08-725-976-16/c
                                                                                                                                                                                                                                                                                                                                                             US-08-379-593-5
                                                                                                                   Sequence 16, Application US/08725976 Patent No. 5929208
                                                                                                                                                                                                                                                                                                        Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sequence 5,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Patent No.
                                                                                     GENERAL INFORMATION: APPLICANT: Heller
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION: APPLICANT: Cros,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: 703-836-2787 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
NAME: Berridge, William p.
REGISTRATION NUMBER: 30,024
REFERENCE/DOCKET NUMBER: WPB
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                        FEATURE: OTHER INFORMATION: consists of nucleosides with an alpha anomer and carries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
NUMBER OF SEQUENCES: 31
CORRESPONDENCE ADDRESS:
ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE:
DESCRIPTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Floppy disk, 1.44M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LILLE OF INVENTION: HAPTEN ASSAY DEVICE AND USE THEREOF NUMBER OF SEQUENCES: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Kurfurst, Robin APPLICANT: Battail, Nicole
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
                                                                PLICANT: Heller, Michael J.; and Tu, Eugene
TLE OF INVENTION: METHODS FOR ELECTRONIC SYNTHESIS OF POLYMERS
                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 02-FEB-1995
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/08/379,593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                             OPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ENGTH:
                                                                                                                                                                                                                                                      1799 ААЛААЛАЛАЛАЛАЛАЛА 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1799 АЛЛАЛАЛАЛАЛАЛАЛАЛАЛ 1818
                                                                                                                                                                                                                        20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20 AAAAAAAAAAAAAAAAAA 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20;
                                                                                                                                                                                                                                                                                                        Similarity

    20 base pairs
nucleic acid

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alexandria
                                                                                                                                                                                                                      AAAAAAAAAAAAAAAAA 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Virginia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     700 South Washington Street, Suite 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cros, Philippe
                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .ication US/08379593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OLIFF & BERRIDGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                703-836-6400
                                                                                                                                                                                                                                                                                                                                                                                                            other nucleic acid
/desc = "SYNTHETIC DNA"
                                                                                                                                                                                                                                                                                                       100.0%;
                                                                                                                                                                                                                                                                                                        0.7%; Score 20;
00.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>មា</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                        1.1e+02
                                                                                                                                                                                                                                                                                                                        DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    storage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                        Length 20
                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                       <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                       0
```

```
US-08-997-080-83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-725-976-16
                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 83, App. Patent No. 59685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                      CLASSIFICATION: PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                        APPLICANT: WATSON, APPLICANT: TAN, PATITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION:
TELEPHONE: (213) 489-1600
TELEFAX: (213) 955-0440
TELEPAX: 67-3510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
                                                                                                                                                                             COMPUTER READABLE FORM: MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: NO. 5929208 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
FILING DATE:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
                                                                                                 SOFTWARE: FastSEQ for Windows Version URRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/997,080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OPERATING SYSTEM:
SOFTWARE: WordPer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: Los Angeles
STATE: California
                                                                                                                                           COMPUTER: IBM CON
OPERATING SYSTEM:
                                                                                                                                                                                                                                                                          STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
les 20; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Murphy, David REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                      TLING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ENGTH:
                                                                                                                                                                                                                                                             ITY: Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1799 ААЛАЛАЛАЛАЛАЛАЛАЛА 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20
                                                                                                                                                                                                               98121
                                                                                                                                                                                                                                             WA
                                                                                                                                                                                                                                                                                                                                                                                                                    Application US/08997080
                                                                                                                                                                                                                                                                            2601 Elliott Avenue, Suite 4185
                                                                                                                                                                                                                              USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WordPerfect (Version
                                                                                                                                                           IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IBM compatibl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                            Law Offices of Ann W. Speckman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            October 4, 1996
                                                                                                                                                                                 Diskette
                                                                                                                                                                                                                                                                                                                                                         PAUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  David B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0.7%;
                                                                                                                                                                                                                                                                                                                                                                      JAMES D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5929208ember 1, 1993
                                                                                                                                                                                                                                                                                                                                        METHODS AND COMPOUNDS FOR THE TREATMENT OF IMMUNOLOGICALLY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WINDOWS (VERSION 3.0)
                                                                                                                                                                                                                                                                                                                           194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 08/146,504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US/08/725,976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                31,125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                including application described below:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 20; ; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      222/211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 2; I
1.1e+02;
                                                                                                                                 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
```

밁

11000.1007

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-997-362-83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-997-080-83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 83, App. -- No. 5985287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 20 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                      APPLICATION NUMBER: U.S. Patent Application No. FILING DATE: June 12, 1979.
APPLICATION NUMBER: U.S. Patent Application No. FILING DATE: August 29, 1996
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRINT APPLICATION DATA:
APPLICATION NUMBER: US/08/997,362
                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REGISTRATION NUMBER: 37,007
REFERENCE/DOCKET NUMBER: 11
TELECOMMUNICATION INFORMATION:
TELEPHONE: 206-269-0565
                                                                                                                                       TELECOMMUNICATION INFORMATION: TELEPHONE: 206-269-0565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Scott, Linda
APPLICANT: Prestidge, Ross
ITTLE OF INVENTION: COMPOUNDS AND METHODS FOR
ITTLE OF INVENTION: TREATMENT AND DIAGNOSIS OF MYCOBACTERIAL INFECTIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                    NAME: Sleath, Janet
REGISTRATION NUMBER: 37,007
REFERENCE/DOCKET NUMBER: 11'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STREET: 2601 E
                                                                                                                                                                                                                                                                                                                                 FILING DATE:
CLASSIFICATION:
STRANDEDNESS: single TOPOLOGY: linear
                                                                                                                     TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ZIP: 98121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: 206-269-0563
                              TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1799 АДАДАДАДАДАДАДАДАД 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAAAAAAAAAAAAAAAA 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         E: Law Offices of Ann W. Speckman
2601 Elliott Avenue, Suite 4185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/08997362
                                                                                                                       206-269-0563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hiyama, Jun
Visser, Elizabeth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Skinner, Margot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tan, Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                               Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0.7%; Score 20; DB 2;
100.0%; Pred. No. 1.1e+
                                                                                                                                                                                                                                                                           .S. Patent Application No. 5985287 08/873,970
1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         83:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                         11000.1002c2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                             5985287 08/705,347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>۰</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
```

RESULT 7
US-08-873-970-83
; Sequence 83, App
; Patent No. 60013

GENERAL INFORMATION:

Application US/08873970 001361

```
당
                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                     US-08-965-780-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; MOLECULE TYPE: US-08-997-362-83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-965-780-1/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 6
                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: Pitsch, S
APPLICANT: Weiss, Pa
APPLICANT: Jenny, Lu
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Patent No. 5986084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                           TELEFAX: 202-887-9093 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                CLASSIFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER: CH 01:
FILING DATE: 18-AUG-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                 MOLECULE TYPE:
DESCRIPTION:
                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                   TELECOMMUNICATION INFORMATION: TELEPHONE: 202-887-9023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
ADDRESSEE: KUBOVCIK & KUBOVCIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                               Local Similarity
                                                                                                                                          STRANDEDNESS: single TOPOLOGY: linear
                                                                                                                                                                                                                                                             NAME: Kubovcik, Ronald J.
REGISTRATION NUMBER: 25,401
REFERENCE/DOCKET NUMBER: FREI-002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
les 20; Conserv
                       1799 АААААААААААААААААА 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1799 AAAAAAAAAAAAAAAAA 1818
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 AAAAAAAAAAAAAAAAAAA 20
                                                                                                                                                              1: 20 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/08965780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             900 17th Street, N.W., Suite 990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Weiss, Patrick A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        USA
                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Other
                                                                                                                other nucleic acid
/desc = "oligoribonucleotide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Stefan
                                                            100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PREPARING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RIBONUCLEOSIDE-DERIVATIVE AND METHOD PREPARING THE SAME
                                                                             0.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0.7%; Score 20;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                              CH 01931/97
                                                0; Mismatches
                                                              Score 20; 
; Pred. No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                               ŏ.
                                                                          DB 2;
                                                              1.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1.1e+02;
                                                                          Length 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 20
                                               Indels
                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>,</u>
                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-765-340-96/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-873-970-83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                              GENERAL INFORMATION:
APPLICANT: UCHIDA, K.,
APPLICANT: UTHIDA, T.,
APPLICANT: TANAKA, Y.,
APPLICANT: MATISUDA, Y.,
APPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
APPLICANT:
                                                                                                                            NUMBER OF SEQUENCES: 185
CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN, L.L.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REGISTRATION NUMBER: 37,007
REFERENCE/DOCKET NUMBER: 111
TELECOMMUNICATION INFORMATION:
TELEPHONE: 206-269-0565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY: linear MOLECULE TYPE: Other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/7/
FILING DATE: 29-AUG-1996
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM: MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Prestidge, Ross
TITLE OF INVENTION: COMPOUNDS
TITLE OF INVENTION: TREATMENT
NUMBER OF SEQUENCES: 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
COUNTRY:
                                                                                                  STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: 206-269-0563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1799 АДАДАДАДАДАДАДАДАДАД
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98121
                                                          I: 345 PARK AVENUE
NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAAAAAAAAAAAAAAAA 20
                             NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Application US/08765340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  E: Law Offices of Ann W. Speckman
2601 Elliott Avenue, Suite 4185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scott, Linda
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Skinner, Margot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hiyama, Jun
Visser, Elizabeth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               UMBER: 08/705,347
29-AUG-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0.7%; Score 20; DB 3;
100.0%; Pred. No. 1.1e+(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US/08/873,970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11000.1002C1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AND DIAGNOSIS OF MYCOBACTERIAL INFECTIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1.1e+02;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-095-855-83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-765-340-96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 20; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Patent No. 6160093
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 83,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOPTWARE: Patentin Release #1.0, Version
SOPTWARE: #1.30 (EPO)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/765,340
FILING DATE: 23-DEC-1996
PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: JP 145146/94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE/DOCKET NUMBER: 14:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEFAX: (212) 751-6849
INFORMATION FOR SEQ ID NO: 96:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP: 10154
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM FC compatible
COMPUTER: IBM FC compatible
FC poos/MS-Dos
FC poos/MS-Dos
FC poos/MS-Dos
                                                                                                                                 ZIP: 98121
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                             APPLICANT: Tan, Paul
APPLICANT: Visser, Blizabeth
APPLICANT: Skinner, Margot
APPLICANT: Skinner, Margot
APPLICANT: Prestidge, Ross
TITLE OF INVENTION: Compounds and Methods for
TITLE OF INVENTION: Treatment and Diagnosis of Mycobacterial Infections
NUMBER OF SEQUENCES: 208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: other nucleic acid DESCRIPTION: /desc = "synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: JP 145146/94
FILING DATE: 27-JUN-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP 311130/94
FILING DATE: 21-NOV-1994
ATTORNEY/AGENT INFORMATION:
                                                       COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                       STREET: 2601 E
CLASSIFICATION:
                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: SERUNIAN, LESLIE REGISTRATION NUMBER: 3
                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                              ADDRESSEE: Law Offices of Ann W. Speckman
STREET: 2601 Elliott Avenue, Suite 4185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1799 АЛАЛАЛАЛАЛАЛАЛАЛАЛ 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20 AAAAAAAAAAAAAAAAA 1
                                                                                                                                                                                                                          WA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/09095855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20 base pairs
                                                                                                                                                                                                       USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                          Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%;
                                      US/09/095,855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       35,353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       o
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 20; DB 3;
Pred. No. 1.1e+(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1452-4005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
```

PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/7
FILING DATE: 29-AUG-1996

08/705,347

```
RESULT 11
                                                                                                                                           밁
                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                               US-09-280-805-266
                                                                                                                                                                                                                                                                      ; OTHER INFORMATION: Description of Artificial Sequence: Oligo US-09-407-675-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-095-855-83
                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: P
SEQ ID NO 1
LENGTH: 20
                                               Sequence 266, Application US/09280805
Patent No. 6184212
                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1, Application US/09407675 Patent No. 6169176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BENERAL INFORMATION:
APPLICANT: Bruice, Thomas C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: 09/347,443
PRIOR FILING DATE: 1999-07-02
PRIOR APPLICATION NUMBER: 60/091,481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         09-407-675-1
                                                                                                                                                                                                                                                                                                                                                                                                PRIOR FILING DATE: 1
NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 60/111,800 PRIOR FILING DATE: 1998-12-11
                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/407,675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS
LENGTH: 20 base pairs
                                                                                                                                                                                                                                                                                                     TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 23-DEC-1997
ATTORNEY/AGENT INFORMATION:
NAME: Sleath, Janet
REGISTRATION NUMBER: 37,007
REFERENCE/DOCKET NUMBER: 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         THE OF INVENTION: DEOXYNUCLEIC ALKYL THIOUREA COMPOUNDS AND USES THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE: Other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION: TELEPHONE: 206-269-0565
APPLICANT: Graham, Brett P.
                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY: 1i1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                        1799 АААЛАЛАЛАЛАЛАЛАЛАЛ 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1799 АДАЛАДАЛАДАЛАДАЛАДА 1818
                                INFORMATION:
                                                                                                                                           μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 AAAAAAAAAAAAAAAAAAA 20
                                                                                                                                           AAAAAAAAAAAAAAAAA 20
                                                                                                                                                                                                                                                                                                                                                                                  PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        206-269-0563
 Loren J. Miraglia, Pamela Nero, Mark J.
Graham, Brett P. Monia
                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30448.65US02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OMBER: 08/997,362
23-DEC-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Dev P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12-JUN-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                      100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              08/873,970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          83:
                                                                                                                                                                                                       Score 20; DB; Pred. No. 1.1
0; Mismatches
                                                                                                                                                                                                       o
•
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11000.1002c3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 20; Pred. No.
                                                                                                                                                                                                                       1.1e+02;
                                                                                                                                                                                                                                      DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1.1e+02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 20
                                                                                                                                                                                                                                   Length 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
APPLICANT: LOIC...
APPLICANT: Graham, Brett r...
APPLICANT: Graham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-280-805-267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-280-805-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 267,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IIM PC
OPERATING SYSTEM: WINDOWS 95
SOFTWARE: WORDDERFECT 6.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/280,
FILING DATE: herewith
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: 609-810-1454
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                               COMPUTER READABLE FORM: MEDIUM TYPE: DISKETT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REGISTRATION NUMBER: 32,257
REFERENCE/DOCKET NUMBER: ISE
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09/048,810
PILID DATE: March 26, 1998
ATTORNEY/AGENT INFORMATION:
NAME: Licata, Jane Massey
REGISTRATION NUMBER: 32,257
                                                                                                      CURRENT APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: DISKETT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS
                                                                                                                                        COMPUTER: IBM PC
OPERATING SYSTEM: WINDOWS 95
SOFTWARE: WORDPERFECT 6.0
APPLICATION NUMBER: UPPILING DATE: herewith CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: Nucleic Acid
STRANDEDNESS: Single
                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CITY: Marlton
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1858 TCCCAGCACTTTGGGAGGCC 1877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20;
                                                                                                                                                                                                                                                                                                                        08053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61842:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           08053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/09280805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B: Law Offices of Jane Massey Licata
66 East Main Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20 base pairs
                                                                                                                                                                                                                                                                                                                                                         U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       609-810-1515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Linear
                                                                                                                                                                                                                                                  DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ANTISENSE MODULATION OF HUMAN MDM2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EXPRESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ANTISENSE MODULATION OF HUMAN MDM2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US/09/280,805
                                                                     US/09/280,805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 20; DB 3;
Pred. No. 1.1e+
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ISPH-0346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pamela Nero, Mark J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
```

S

닭

```
CURRENT FILING DATE: 199-02-12

NUMBER OF SEQ ID NOS: 12

SOFTWARE: Patentin Ver. 2.1

LENGTH: 20

Type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 13
US-09-250-075-1/c
                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       跊
                                                                                                                                           US-09-173-936B-14/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; TOPOLOGY:
; ANTI-SENSE:
US-09-280-805-267
                                                                                                                                                           RESULT 14
                                                                                                                                                                                                                                                                                                                                                            US-09-250-075-:
                                                                                     Sequence 14, Application US/09173936B Patent No. 6238865 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 1, Application US/09250075 Patent No. 6207819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local :
                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: Compounds Processes And Intermediates For Synthesis Of TITLE OF INVENTION: Mixed Backbone Oligomeric Compounds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Manoharan, Muthiah APPLICANT: Maier, Martin A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: 609-810-1454 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: misc feature
LOCATION: (1)...(19)
COTHER INFORMATION: 2'-methoxyethoxy (MOE)
OTHER INFORMATION: Description of Artificial Sequence:
OTHER INFORMATION: Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA CORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Licata, Jane Massey
REGISTRATION NUMBER: 32,257
REFERENCE/DOCKET NUMBER: ISPH-0346
TELECOMMUNICATION INFORMATION:
TELEPHONE: 609-810-1515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
LENGTH: 20 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09/0
FILING DATE: March 26, 1
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Match 0.7%;
Local Similarity 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: Nucleic Acid
STRANDEDNESS: Sing
                                                                                                                                                                                                                                                                                    Local Similarity es 20; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1851 CCTGTAATCCCAGCACTTTG 1870
                           APPLICANT: Zhen, Huang; Szostak, Jack W.
TITLE OF INVENTION: A Simple and Efficient Method to Label and Modify 3'-
Terminal
                                                                                                                                                                                                                                                 1799 ададададададададад 1818
                                                                                                                                                                                                                 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCTGTAATCCCAGCACTTTG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Yes
                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Single
                                                                                                                                                                                                                                                                                0.7%; Score 20; DB 3; L,
100.0%; Pred. No. 1.1e+02;
ative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        09/048,810
of RNA Usin
                RNA Using DNA Polymerase and a Synthetic Template with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 20;
                                                                                                                                                                                                                                                                                                                     Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                             No. 6207819el
                                                                                                                                                                                                                                                                                    o
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                      0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

```
Ś
밁
                               Ś
                                                                                                                                       US-09-454-704A-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 15
US-09-454-704A-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-173-936B-14
                                                                                                                                                                                                                       SOFTWARE: Fat
SOFTWARE: Fat
SEQ ID NO 13
FANGTH: 20
                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: Blumberg, Bruce
TITLE OF INVENTION: High Throughput Functional Screening of
TITLE OF INVENTION: CDNAs
                                                                 Best Local Similarity Matches 20; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity Matches 20; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 13, Application US/09454704A Patent No. 6274321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/454,704A
CURRENT FILING DATE: 1999-12-03
NUMBER OF SEQ ID NOS: 14
                                                                                                                                                                                                          LENGTH: 20
TYPE: DNA
                                                                                                                                                                                                                                                                                                                                   FILE REFERENCE: P-UC 3662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/063,757
FILING DATE: 17-OCT-1997
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                       OTHER INFORMATION: cDNA
                                                                                                                                                                       ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM-MS
OPERATING SYSTEM: Window 95
SOFTWARE: Microsoft Word
CURRENT APPLICATION DATA:
APPLICATION UNMBER: US/09/173,936B
FILING DATE: 16-Oct-1998
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY: USA
ZIP: 10176
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.50 inch Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES: 21
CORRESPONDENCE ADDRESS: 25
ADDRESSEE: Cohen, Pontani, Lieberman & Pavane
STREET: 551 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY: linear MOLECULE TYPE: DNA
                                1799 АЛДАЛАЛАЛАЛАЛАЛАЛА 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1799 АЛАЛАЛАЛАЛАЛАЛАЛА 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE DESCRIPTION: SEQ ID NO: 14:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20 AAAAAAAAAAAAAAAAAA 1
                                                                                                                                                                                                                                                             FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: New York
STATE: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ENGTH: 20 bases
                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                   100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0.7%;
                                                                                                    0.7%;
                                                          0;
                                                                                  Score 20; DB 3; Pred. No. 1.1e+(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 20; DB 3; I
Pred. No. 1.1e+02;
                                                                   Mismatches
                                                                                   1.1e+02;
                                                                                                    Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 20
                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

Search completed: March Job time: 218 secs

7, 2004, 20:11:12

```
Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing: Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Minimum DB seq length: 0 Maximum DB seq length: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Word size :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scoring table:
                                                     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OLIGO_NUC
Gapop 60.0 , Gapext 60.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               March 7, 2004, 18:09:14; Search time 963 Seconds (without alignments)
10702.641 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2421054 segs, 1828716029 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-966-880A-7
2818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Published_Applications_NA:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                       / Cgn2_6/ptodata/1/pubpna/USO6_NEW_PUB.seq:*
/ Cgn2_6/ptodata/1/pubpna/USO6_NEW_PUB.seq:*
/ Cgn2_6/ptodata/1/pubpna/USO6_PUBCOMB.seq:*
/ Cgn2_6/ptodata/1/pubpna/USO7_NEW_PUB.seq:*
/ Cgn2_6/ptodata/1/pubpna/USO7_NEW_PUB.seq:*
/ Cgn2_6/ptodata/1/pubpna/USO8_PUBCOMB.seq:*
/ Cgn2_6/ptodata/1/pubpna/USO8_PUBCOMB.seq:*
/ Cgn2_6/ptodata/1/pubpna/USO8_PUBCOMB.seq:*
/ Cgn2_6/ptodata/1/pubpna/USO9_PUBCOMB.seq:*
/ Cgn2_6/ptodata/1/pubpna/USO0_NEW_PUB.seq:*
/ Cgn2_6/ptodata/1/pubpna/USO0_NEW_PUB.seq:*
/ Cgn2_6/ptodata/1/pubpna/USO0_NEW_PUB.seq:*
/ Cgn2_6/ptodata/1/pubpna/USO0_NEW_PUB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6/ptodata/1/pubpna/US07
SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PUBCOMB.seq:*
```

Result No.	Score	Query Match	Length	₽B	ID	Description
-	20	0.7	20	و و	US-09-752-983-266	Sequence 266, App
2	20	0.7	20	9	US-09-752-983-267	267,
n w	20	0.7	20	ဖ	US-09-733-294A-82	82, 1
4	20	0.7	20	9	US-09-973-788A-55	ហ
ຫ	20	0.7	20	9	US-09-973-638A-55	
6	20	0.7	20	9	US-09-974-007-55	UI UI
7	20	0.7	20	9	US-09-976-617A-55	5 5 7
œ	20	0.7	20	9	US-09-961-949A-55	បា បា
9	20	0.7	20	9	US-09-760-500A-55	55,
10	20	0.7	20	ø	US-09-967-409A-55	Sequence 55, App
11	20	0.7	20	ø	US-09-975-062A-55	
12	20	0.7	20	ω	US-09-976-378A-55	
13	20	0.7	20	ø	US-09-976-577-55	55
c 14	20	0.7	20	ω	US-09-771-554-5	Sequence 5, Appl
15	20	0.7	20	v	US-09-966-312-55	Sequence 55, App

aα	ο	ດດ ດດ	aa	ი
4442	20044 0044 0044 0044	0 E C C C C C	22222222222222222222222222222222222222	16 17 18 19
0000	000000	, , , , , , , , , , , , , , , , , , ,	0000000000	22222
			000000000	0000
2222	222222	000000	2000000000	00000
13 14 14	10010	110000	000000000000000000000000000000000000000	
-10-051-643-8 -10-176-055-1 -10-117-267-1 -10-112-653-2	9-776-479- 9-776-479- 9-976-601A 9-975-059A 9-976-968A 0-208-357-	-09-912-014-15 -09-912-014-16 -09-997-672-40 -09-976-863A-5 -09-881-535-2	S-09-880-505 S-09-820-279E S-09-888-326- S-09-888-326- S-09-888-326- S-09-981-344- S-09-971-318A S-09-971-318A	7-7 7-7 6-4 3-7
equence 83 equence 11 equence 1, equence 21		0 4 4 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Sequence 83, App Sequence 55, App Sequence 838, Ap Sequence 839, Ap Sequence 85, App Sequence 55, App Sequence 55, App Sequence 55, App	Sequence 55, Appl Sequence 70, Appl Sequence 55, Appl Sequence 55, Appl

ALIGNMENTS

```
RESULT 1
US-09-752-983-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 266, Application US/09752983 Patent No. US20010016575A1
                                                                                CLASSIFICATION:
PRICR APPLICATION DATA:
APPLICATION NUMBER: 09/280,805
FILING DATE: -UNKNOWN>
ATTORNEY/AGENT INFORMATION:
NAME: Licata, Jane Massey
REGISTRATION NUMBER: 32,257
REFERENCE/DOCKET NUMBER: 159H-0346
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
APPLICANT: Loren J. Miraglia, Pamela Nero, Mark J.
APPLICANT: Graham, Brett P. Monia
TITLE OF INVENTION: ANTISENSE MODULATION OF HUMAN MDM2
TITLE OF INVENTION: EXPRESSION
TELEFAX: 609-810-1454
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDION TYPE: DISKETTE, 3.5 INCH,
COMPUTER: IBM PC
OPERATING SYSTEM: WINDOWS 95
                                                                                                                                                                                                                                                                                      SOPTWARE: WORDPERFECT 6.0
CURRENT APPLICATION DATA:
APPLICATION UNMEER: US/99/752,983
FILING DATE: 02-Jan-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CITY: Marlton
                                                                  TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      08053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                걸
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             66 East Main Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Law Offices of Jane Massey Licata
                                                                  609-810-1515
                      266:
                                                                                                                                                                                                                                                                                                                                                                                                                           1.44 Mb STORAGE
```

```
RESULT 3
US-09-733-294A-82/c
; Sequence 82, Application US/09733294A
                                                                                   片
                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 2
US-09-752-983-267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-752-983-266
                                                                                                                                                                                                               US-09-752-983-267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match

Best Local Similarity 100.

Matches 20; Conservative
                                                                                                                                                  Matches
                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Patent No. US20010016575A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 267,
                                                                                                                                                                                                                                                                                                                  REGISTRATION NUMBER: 32,257
REFERENCE/DOCKET NUMBER: ISPH-0346
TELECOMMUNICATION INFORMATION:
TELEPHONE: 609-810-1515
TELEPHX: 609-810-1454
INFORMATION FOR SEQ ID NO: 267:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
APPLICANT: Loren J. Miraglia, Pamela Nero, Mark J.
APPLICANT: Graham, Brett P. Monia
TITLE OF INVENTION: ANTISENSE MODULATION OF HUMAN MDM2
TITLE OF INVENTION: EXPRESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09/2/
FILING DATE: <Unknown>
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
ADDRESSEE: Law Offices of Jane Massey Licata
                                                                                                                                                                                                                          TOPOLOGY:
                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM: MEDIUM TYPE: DISKETTE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY: Linear ANTI-SENSE: Yes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION DATA:
APPLICATION NUMBER: US,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                    LENGTH: 20 base pairs TYPE: Nucleic Acid STRANDEDNESS: Single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC
OPERATING SYSTEM: WINDOWS 95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 20 base pairs
TYPE: Nucleic Acid
STRANDEDNESS: Single
                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Licata, Jane Massey REGISTRATION NUMBER: 32,2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: WORDPERFECT 6.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1858 TCCCAGCACTTTGGGAGGCC 1877
                                                                                                             1851 CCTGTAATCCCAGCACTTTG 1870
                                                                                                                                                 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 TCCCAGCACTTTGGGAGGCC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               08053
                                                                                   CCTGTAATCCCAGCACTTTG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            걸
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Application US/09752983
                                                                                                                                          0.7%; Score 20; llarity 100.0%; Pred. No. Conservative 0; Mismatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            U.S.A.
                                                                                                                                                                                                                                           Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                02-Jan-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                09/280,805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US/09/752,983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3.5 INCH, 1.44 Mb STORAGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 20; ; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Mismatches
                                                                                                                                              Mismatches
                                                                                                                                                            DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                              0
                                                                                                                                                                           Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 20
                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                              Gaps
                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
```

```
APPLICANT: Brett P. Monia
APPLICANT: William Gaarde
APPLICANT: Susan M. Freier
APPLICANT: Susan M. Freier
APPLICANT: Edward V. Wancewicz
TITLE OF INVENTION: ANTISENSE MODULATION OF TERT EXPRESSION
FILE REFERENCE: ISPH-0527;
CURRENT APPLICATION UNMEER: US/09/733,294A
CURRENT FILING DATE: 2000-12-07
PRIOR APPLICATION NUMBER: 09/572,423
PRIOR APPLICATION NUMBER: 09/572,423
PRIOR FILING DATE: 2000-05-16
NUMBER OF 520 ID NOS: 108
SEQ ID NO 82
; OTHER INFORMATION: Description of Artificial Sequence:random; OTHER INFORMATION: synthetic sequence US-09-973-788A-55
                                                                                                                                                                                                                                                                                                               FILE REFERENCE: 00-713-i10
CURRENT APPLICATION NUMBER: US/09/973,788A
CURRENT APPLICATION NUMBER: 002-03-05
PRIOR PLICATION NUMBER: 09/603,830
PRIOR FILLING DATE: 2000-06-26
PRIOR PPLICATION NUMBER: 09/344,667
PRIOR PPLICATION NUMBER: 09/240,755
PRIOR APPLICATION NUMBER: 09/240,755
PRIOR APPLICATION NUMBER: 09/240,755
PRIOR PILING DATE: 1999-01-29
PRIOR APPLICATION NUMBER: PCT/US97/12783
PRIOR APPLICATION NUMBER: 60/031,809
PRIOR APPLICATION NUMBER: 60/031,809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; OTHER INFORMATION: Antisense Oligonucleotide US-09-733-294A-82
                                                                                                                                                SOFTWARE: Microsoft Word 2000
SEQ ID NO 55
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Patent No. US20020045588A1
                                                                                                                                                                                                                      PRIOR FILING DATE: 2000-04-26
NUMBER OF SEQ ID NOS: 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Mirkin, Chad A.
APPLICANT: Letsinger, Robert
APPLICANT: Mucic, Robert C.
APPLICANT: Storhoff, James J
                                                                                                                                                                                                                                                                      PRIOR FILING DATE: 1996-07-29
PRIOR APPLICATION NUMBER: 60/200,161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Elghanian, Robert
APPLICANT: Taton, Thomas A.
TITLE OF INVENTION: NANOPARTICLES HAVING OLIGONUCLEOTIDES ATTACHED THERETO
TITLE OF INVENTION: AND USES THEREFOR
                                                                           TYPE: DNA ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1846 TCACGCCTGTAATCCCAGCA 1865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                55, Application US/09973788A
5. US20020127574A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20 TCACGCCTGTAATCCCAGCA 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Storhoff, James J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0.7%; Score 20;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ۰,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

Best Local Similarity Matches 20; Conserv

0.7%; Score 20; DB nilarity 100.0%; Pred. No. 55 Conservative 0; Mismatches

55 55

9

Length 20;

Indels

0,

Gaps

AAAAAAAAAAAAAAAAAA 1818

```
맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 5
US-09-973-638A-55
                                                                                                                                                                                                                                                                                                                                                                                   US-09-974-007-55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-973-638A-55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S-09-y,
Sequence 55, App
No. US200
                                                                                                                                                                                                                                                                                                                                     Sequence 55, Application US/09974007 Patent No. US20020137071A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
APPLICANT:
APPLICANT:
                                                           TITLE OF INVENTION: NANOPARTICLES HAVING OLIGONUCLEOTIDES ATTACHED THERETO TITLE OF INVENTION: AND USES THEREFOR FILE REFERENCE: 00.713-18 CURRENT APPLICATION NUMBER: US/09/974,007 CURRENT FILING DATE: 2002-03-12 CURRENT FILING DATE: 2002-03-12 CURRENT FILING DATE: 2002-03-12
PRIOR APPLICATION NUMBER: 09/603,830
PRIOR FILING DATE: 2000-06-26
PRIOR APPLICATION NUMBER: 09/344,667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: Microsoft Word 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR FILING DATE: 1996-07-29
PRIOR APPLICATION NUMBER: 60/200,161
PRIOR FILING DATE: 2000-04-26
NUMBER OF SEQ ID NOS: 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR FILING DATE: 1999-06-25
PRIOR APPLICATION NUMBER: 09/240,755
PRIOR FILING DATE: 1999-01-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 09/603,830 PRIOR FILING DATE: 2000-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/09/973,638A
CURRENT FILING DATE: 2002-03-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: NANOPARTICLES HAVING OLIGONUCLEOTIDES ATTACHED THERETO TITLE OF INVENTION: AND USES THEREFOR FILE REFERENCE: 00-713-19
                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                         APPLICANT: Mirkin, Chad A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 09/344,667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION: Description of Artificial Sequence:random OTHER INFORMATION: synthetic sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: PCT/US97/12783
FILING DATE: 1997-07-21
APPLICATION NUMBER: 60/031,809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1799 АЛАЛАЛАЛАЛАЛАЛАЛАЛ 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 AAAAAAAAAAAAAAAAA 20
                                                                                                                                                                           Mucic, Robert C.
Storhoff, James J.
Elghanian, Robert
Taton, Thomas A.
                                                                                                                                                                                                                                           Letsinger, Robert L.
Mucic, Robert C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Elghanian, Robert Taton, Thomas A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Storhoff, James J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/09973638A
320020137070A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Letsinger, Robert L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Robert C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0.7%; Score 20;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
PRIOR APPLICATION NUMBER: 09/240,755
PRIOR FILING DATE: 1999-01-29
PRIOR FILING DATE: 1999-07-21
PRIOR FILING DATE: 1997-07-21
PRIOR APPLICATION NUMBER: E0/031,809
PRIOR FILING DATE: 1996-07-29
PRIOR APPLICATION NUMBER: 60/200,161
PRIOR APPLICATION NUMBER: 60/200,161
PRIOR PILING DATE: 2000-04-26
NUMBER OF SEQ ID NOS: 64
SOFTWARE: Microsoft Word 2000
SEQ ID NO 55
TENET TORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                    US-09-976-617A-55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-974-007-55
                                                                                                                                                                                                                             SEQ ID NO 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 55, Application US/09976617A Patent No. US20020137072A1
    Matches
                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: NANOPARTICLES HAVING OLIGONUCLEOTIDES ATTACHED THERETO FITTE OF INVENTION: AND USES THEREFOR FILE REFERENCE: 00-713-124 CURRENT APPLICATION NUMBER: US/09/976,617A CURRENT FILING DATE: 2002-03-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                              NUMBER OF SEQ ID NOS: 64
SOFTWARE: Microsoft Word 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 09/603,830 PRIOR FILING DATE: 2000-06-26
                                                                                                                                                                                                                                                                                    PRIOR FILING DATE: 2000-04-26
                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 09/240,755
PRIOR FILING DATE: 1999-01-29
PRIOR APPLICATION NUMBER: PCT/US97/1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 09/344,667 PRIOR FILING DATE: 1999-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                   OTHER INFORMATION: Description of Artificial Sequence:random OTHER INFORMATION: synthetic sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
OTHER INFORMATION: Description of Artificial Sequence:random
OTHER INFORMATION: synthetic sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA
                                                                                                                                             FEATURE:
                                                                                                                                                              ORGANISM: Artificial Sequence
                                                                                                                                                                                     TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Artificial Sequence
                                                                                                                                                                                                        LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/200,161
                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/031,809
FILING DATE: 1996-07-29
                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1999-01-29
APPLICATION NUMBER: PCT/US97/12783
FILING DATE: 1997-07-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1799 далалалалалалалал 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 AAAAAAAAAAAAAAAAAAA 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Elghanian, Robert Taton, Thomas A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mucic, Robert C.
0.7%; Score 20; ilarity 100.0%; Pred. No. Conservative 0; Mismatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2002-03-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0.7%; Score 20;
L00.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    55
80
                     DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Indels
                                      Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 20
  Indels
  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
  0
```

1799 AAAAAAAAAAAAAAAAAAAA 1818

片

AAAAAAAAAAAAAAAAA 20

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-961-949A-55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-760-500A-55
                                                                                                                                                                                                                                                                                                                                                                      Sequence 55, Application US/09760500A Patent No. US20020155442A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: M
SEQ ID NO 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Patent No. US20020146720A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 55,
                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -09-961-949A-55
                                                                                                                                                                                                                                                                                   APPLICANT:
APPLICANT:
                                                                   CURRENT APPLICATION NUMBER: US/09/760,500A CURRENT FILING DATE: 2002-03-05 PRIOR APPLICATION NUMBER: 09/603,830 PRIOR FILING DATE: 2000-06-26
                                                                                                                                                      APPLICANT: Taton, Thomas A.
TITLE OF INVENTION: NANOPARTICLES HAVING OLIGONUCLEOTIDES ATTACHED THERETO
TITLE OF INVENTION: AND USES THEREFOR
FILE REFERENCE: 00-715-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 09/240,755
PRIOR FILING DATE: 1999-01-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/09/961,949A
CURRENT FILING DATE: 2001-09-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: NANOPARTICLES HAVING OLIGONUCLEOTIDES ATTACHED THERETO TITLE OF INVENTION: AND USES THEREFOR FILE REFERENCE: 00-713-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Mirkin, Chad
                                            PRIOR APPLICATION NUMBER: 09/344,667
                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR FILING DATE: 1999-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 09/344,667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR FILING DATE: 2000-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: Description of Artificial Sequence:random OTHER INFORMATION: synthetic sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PPLICANT:
                                                                                                                                                                                                                                                                 PPLICANT:
                                                                                                                                                                                                                                                                                                                           PPLICANT: Mirkin, Chad A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: PCT/US97/12783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1799 АААААААААААААААААА 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/200,161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1996-07-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/031,809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Microsoft Word 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ААААААААААААААА 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ING DATE: 2001-09-20 CATION NUMBER: 09/603,830
G DATE: 1999-06-25.
CATION NUMBER: 09/240,755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mucic,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/09961949A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Taton, Thomas A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Letsinger, Robert L.
                                                                                                                                                                                                                                        Storhoff, James J.
Elghanian, Robert
                                                                                                                                                                                                                                                                                   Mucic, Robert C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Elghanian, Robert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Robert C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000-04-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1997-07-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0.7%; Score 20;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; OTHER INFORMATION: Description of Artificial Sequence:random; OTHER INFORMATION: synthetic sequence US-09-760-500A-55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
밁
                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-967-409A-55
                                                                                                                                                                                                                                                                      SOFTWARE: Microsoft Word 2000 SEQ ID NO 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: Microsoft Word 2000 SEQ ID NO 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 55, Application US/09967409A Patent No. US20020155458A1
                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                              -09-967-409A-55
                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 60/200,161
PRIOR FILING DATE: 2000-04-26
NUMBER OF SEQ ID NOS: 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Mirkin
APPLICANT: Letsi:
APPLICANT: Mucic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQ ID NOS: 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: PCT/US97/12783
PRIOR FILING DATE: 1997-07-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION NUMBER: US/09/967,409A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 09/344,667
PRIOR FILING DATE: 1999-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: 09/603,830
PRIOR FILING DATE: 2000-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR FILING DATE: 1996-07-29
PRIOR APPLICATION NUMBER: 60/200,161
                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR FILING DATE: 1999-01-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR FILING DATE: 2000-04-26
                                                                                                                                                           OTHER INFORMATION: Description of Artificial Sequence:random OTHER INFORMATION: synthetic sequence
                                                                                                                                                                                                                                                                                                                                                                              RIOR APPLICATION NUMBER: 60/031,809
                                                                                                                                                                                                                                                                                                                                                                                                                                                       RIOR APPLICATION NUMBER: 09/240,755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TILE OF INVENTION: NANOPARTICLES HAVING OLIGONUCLEOTIDES ATTACHED THERETO ITLE OF INVENTION: AND USES THEREFOR TLE REFERENCE: 00-713-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RIOR APPLICATION NUMBER: 60/031,809
                                                                                                                                                                                               ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                   TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PPLICANT:
                                                                                                                                                                                                                                                    LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1996-07-
                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: PCT/US97/12783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1799 AAAAAAAAAAAAAAAAAAA 1818
                                   1799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAAAAAAAAAAAAAAA 20
                                 AAAAAAAAAAAAAAAAAAA 1818
АЛЛАЛАЛАЛАЛАЛАЛАЛА 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Taton, Thomas A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mucic, Robert C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Storhoff, James J.
Elghanian, Robert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                  1997-07-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chad A.
                                                                                      100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
                                                                                    0.7%; Score 20;
.00.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0.7%; Score 20;
00.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
                                                                   0
                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22 B
                                                                                                         DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 20;
                                                                                                       Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                       Indels
                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                       0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-976-378A-55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 11
US-09-975-062A-55
                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 55, Application UPatent No. US20020155461A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: Microsoft Word 2000
SEQ ID NO 55
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 55, Application U Patent No. US20020155459A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: Description of Artificial Sequence:random OTHER INFORMATION: synthetic sequence -09-975-062A-55
                                                               PRIOR APPLICATION NUMBER: 09/603,830
PRIOR FILING DATE: 2000-06-26
PRIOR APPLICATION NUMBER: 09/344,667
PRIOR FILING DATE: 1999-06-25
                                                                                                                                                 TITLE OF INVENTION: NANOPARTICLES HAVING OLIGONUCLEOTIDES ATTACHED THERETO TITLE OF INVENTION: AND USES THEREFOR FILE REFERENCE: 00-713-125 CURRENT APPLICATION NUMBER: US/09/976,378A CURRENT FILING DATE: 2002-03-05
                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 09/603,830
PRIOR FILING DATE: 2000-06-26
PRIOR DATE: 2000-06-26
                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Mirkin, Chad A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 09/240,755 PRIOR FILING DATE: 1999-01-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION NUMBER: US/09/975,062A
CURRENT FILING DATE: 2001-10-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Mirkin, Chad A. APPLICANT: Letsinger, Rol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: 60/031,809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: 09/344,667 PRIOR FILING DATE: 1999-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FITLE OF INVENTION: NANOPARTICLES HAVING OLIGONUCLEOTIDES ATTACHED THERETOFITLE OF INVENTION: AND USES THEREFOR FILE REFERENCE: 00-713-111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                      APPLICATION NUMBER: 09/240,755
FILING DATE: 1999-01-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1799 ААЛАЛАЛАЛАЛАЛАЛАЛАЛ 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/200,161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1996-07-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1997-07-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: PCT/US97/12783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mucic, kobert ... Storhoff, James J. Blghanian, Robert Thomas A.
IG DATE: 1999-01-29
CATION NUMBER: PCT/US97/12783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAAAAAAAAAAAAAAAAA 20
                                                                                                                                                                                                                                                                                                                                                                                                                                   Application US/09976378A
                                                                                                                                                                                                                                                           Elghanian, Robert
Taton, Thomas A.
                                                                                                                                                                                                                                                                                                   Storhoff, James J.
                                                                                                                                                                                                                                                                                                                         Letsinger, Robert L.
Mucic, Robert C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/09975062A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Letsinger, Robert L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000-04-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 20; ; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

```
뭉
                                5
                                                                                                                                       US-09-976-577-55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-976-577-55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-976-378A-55
                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS: 64
SOFTWARE: Microsoft Word 2000
SEQ ID NO 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 55, App
Sequence 55, App
                                                                   Matches
                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS: 64
SOPTWARE: Microsoft Word 2000
SEQ ID NO 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 09/603,830
PRIOR FILING DATE: 2000-06-26
PRIOR APPLICATION NUMBER: 09/344,667
PRIOR FILING DATE: 1999-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 60/200,161 PRIOR FILING DATE: 2000-04-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/976,577
CURRENT FILING DATE: 2002-03-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: NANOPARTICLES HAVING OLIGONUCLEOTIDES ATTACHED THERETO TITLE OF INVENTION: AND USES THEREFOR FILE REFERENCE: 00-713-120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Mirkin, APPLICANT: Letsing
                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 09/240,755
PRIOR FILING DATE: 1999-01-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 60/031,809 PRIOR FILING DATE: 1996-07-29
                                                                                                                                                                                           TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                  OTHER INFORMATION: Description of Artificial Sequence:random OTHER INFORMATION: synthetic sequence
                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: PCT/US97/12783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/200,161
PRIOR FILING DATE: 2000-04-26
                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
OTHER INFORMATION: Description of Artificial Sequence:random
OTHER INFORMATION: synthetic sequence
                                                                                                                                                                                                                                        LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/031,809
                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1997-07-
                              1799 АААААААААААААААААА 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1799 АЛАЛАЛАЛАЛАЛАЛАЛАЛ 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20
AAAAAAAAAAAAAAAAA 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAAAAAAAAAAAAAAAA 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Elghanian, Robert
Taton, Thomas A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Letsinger, Robert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/09976577
                                                                0.7%; Score 20; larity 100.0%; Pred. No. Conservative 0; Mismatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    L55462A1
                                                                                                                                                                                                                                                                                                                                                1996-07-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chad A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Robert C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000-04-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 20;
Pred. No.
                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                    55
BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 9;
                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                  Length 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 20
                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                <u>.</u>.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
FILE REFERENCE: 108473
CURRENT APPLICATION NUMBER: US/09/771,554
CURRENT FILING DATE: 201-01-31
PRIOR APPLICATION NUMBER: PCT/FR99/01846
PRIOR FILING DATE: 1999-07-27
PRIOR APPLICATION NUMBER: FR 98/10084
PRIOR FILING DATE: 1998-07-31
NUMBER OF SEQ ID NOS: 5
SOFTWARE: PatentIn version 3.0
SEQ ID NO 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; OTHER INFORMATION: Synthetic Oligonucleotide US-09-771-554-5
                                                                                      SOFTWARE: Microsoft Word 2000 SEQ ID NO 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 5, Application US/09771554
Patent No. US20020155496A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 55, Application U Patent No. US20020164605A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -09-966-312-55
                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/031,809
PRIOR TILING DATE: 1996-07-29
PRIOR APPLICATION NUMBER: 60/200,161
PRIOR FILING DATE: 2000-04-26
                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/966,312
CURRENT FILING DATE: 2002-05-07
CURRENT PELICATION NUMBER: 09/603,830
PRIOR PELICATION DATE: 2000-06-26
PRIOR PELICATION NUMBER: 09/344,667
PRIOR PELICATION NUMBER: 09/344,667
PRIOR FILING DATE: 1999-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: UERON, Laurent
APPLICANT: UERON, Laurent
APPLICANT: DELAIR, Thierry
APPLICANT: MANDRAND, Bernard
TITLE OF INVENTION: SATURATED AND UNSATURATED ABIETANE DERIVATIVES, DERIVED CONJUGATE
TITLE OF INVENTION: USES IN A DIAGNOSTIC COMPOSITION, A REAGENT AND A DEVICE
FILE REFERENCE: 108473
TO (100/771) SEA
                                                                                                                                       NUMBER OF SEQ ID NOS: 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: NANOPARTICLES HAVING OLIGONUCLEOTIDES ATTACHED THERETO TITLE OF INVENTION: AND USES THEREFOR FILE REFERENCE: 00-713-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Letsinger, Robert L.
APPLICANT: Mucic, Robert C.
APPLICANT: Storhoff, James J.
APPLICANT: Elghanian, Robert
APPLICANT: Taton, Thomas A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: CHARLES, Marie Helene APPLICANT: PIGA, Nadia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Mirkin, Chad A. APPLICANT: Letsinger, Rob
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 20
TYPE: DNA
ORGANISM: Artificial Sequence
TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                   ENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity tes 20; Conserv
                                                                                                                                                                                                                                                   APPLICATION NUMBER: PCT/US97/12783 FILING DATE: 1997-07-21
                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 09/240,755
FILING DATE: 1999-01-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1799 АААААААААААААААААА 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20 AAAAAAAAAAAAAAAA 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BATTAIL-POIROT, Nicole
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Application US/09966312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0.7%; Score 20; DB 9;
100.0%; Pred. No. 55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
; OTHER INFORMATION: Description of Artificial Sequence:random; OTHER INFORMATION: synthetic sequence
US-09-966-312-55

Query Match
Best Local Similarity 100.0%; Pred. No. 55;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps
Qy 1799 AAAAAAAAAAAAAAAAA 1818
Qy 1799 AAAAAAAAAAAAAAAA 20
```

Search completed: March Job time : 964 secs

7, 2004, 23:00:09

```
Post-processing: Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Minimum DB seq length: 0 Maximum DB seq length: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Word size :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OM nucleic -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OLIGO_NUC
Gapop_60.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               March 7, 2004, 14:48:48; Search time 9053 Seconds (without alignments) 10952.666 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-966-880A-7
2818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               37577330 seqs, 17593059518 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /cgm2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /cgm2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /cgn2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /cgn2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /cgn/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /cgn2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            jn2_6/ptodata/2/pna/PCTUS_COMB.seq:*
jn2_6/ptodata/2/pna/US06_COMB.seq:*
jn2_6/ptodata/2/pna/US07_COMB.seq:*
jn2_6/ptodata/2/pna/US080_COMB.seq:*
jn2_6/ptodata/2/pna/US081_COMB.seq:*
jn2_6/ptodata/2/pna/US082_COMB.seq:*
jn2_6/ptodata/2/pna/US083_COMB.seq:*
jn2_6/ptodata/2/pna/US083_COMB.seq:*
jn2_6/ptodata/2/pna/US085_COMB.seq:*
jn2_6/ptodata/2/pna/US086_COMB.seq:*
jn2_6/ptodata
m2 6/ptodata/2/pna/US086_COMB.seq:*
m2 6/ptodata/2/pna/US087_COMB.seq:*
m2 6/ptodata/2/pna/US089_COMB.seq:*
m2 6/ptodata/2/pna/US089_COMB.seq:*
m2 6/ptodata/2/pna/US099_COMB.seq:*
m2 6/ptodata/2/pna/US090_COMB.seq:*
m2 6/ptodata/2/pna/US092A_COMB.seq:*
m2 6/ptodata/2/pna/US092A_COMB.seq:*
m2 6/ptodata/2/pna/US093A_COMB.seq:*
m2 6/ptodata/2/pna/US093A_COMB.seq:*
m2 6/ptodata/2/pna/US093A_COMB.seq:*
m2 6/ptodata/2/pna/US095A_COMB.seq:*
m2 6/ptodata/2/pna/US095A_COMB.seq:*
m2 6/ptodata/2/pna/US095A_COMB.seq:*
m2 6/ptodata/2/pna/US095A_COMB.seq:*
m2 6/ptodata/2/pna/US095A_COMB.seq:*
m2 6/ptodata/2/pna/US096A_COMB.seq:*
m2 6/ptodata/2/pna/US096B_COMB.seq:*
m2 6/ptodata/2/pna/US096B_COMB.seq:*
m2 6/ptodata/2/pna/US096B_COMB.seq:*
m2 6/ptodata/2/pna/US096B_COMB.seq:*
m2 6/ptodata/2/pna/US097A_COMB.seq:*
m2 6/ptodata/2/pna/US097B_COMB.seq:*
m2 6/ptodata/2/pna/US098B_COMB.seq:*
m2 6/ptodata/2/pna/US098B_COMB.seq:*
m2 6/ptodata/2/pna/US098B_COMB.seq:*
m2 6/ptodata/2/pna/US099B_COMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gapext 60.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2688236
```

```
44. / (cgm2 6/ptodata/2/pna/US100B COMB.seq;
45. / (cgm2 6/ptodata/2/pna/US101A_COMB.seq;
46. / (cgm2 6/ptodata/2/pna/US101A_COMB.seq;
47. / (cgm2 6/ptodata/2/pna/US101A_COMB.seq;
48. / (cgm2 6/ptodata/2/pna/US101A_COMB.seq;
59. / (cgm2 6/ptodata
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Result

οοο

```
NUMBER OF SEQ ID NOS: 56
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 10
LENGTH: 20
TYPE: DNA
CRGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                         RESULT 1
                                                                                                                                                                                                                                         PCT-US00-07938-10
                                                                                                                          Sequence 10, Application PC/TUS0007938
GENERAL INFORMATION:
APPLICANT: Generatics Institute, Inc.
TITLE OF INVENTION: MICROSATELLITE REPEATS IN THE COSTIMULATORY RECEPTOR LOCUS AND TITLE OF INVENTION: THEREOF FILE REFERENCE: GNN-5343CPPC CURRENT APPLICATION NUMBER: PCT/US00/07938
CURRENT FILING DATE: 2000-03-24
                                                                                              PRIOR APPLICATION NUMBER: 60/
PRIOR FILING DATE: 1999-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score
                                                                                                                                                                                                                                                                                                                                            Match Length DB
                                                                                                                                                                                                                                                                                                                                            60/126,215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PCT-US02-35719-13
PCT-US02-38281-266
PCT-US02-38281-267
PCT-US02-38281-267
PCT-US02-39200-36
PCT-US03-14100A-31
PCT-US03-14100B-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PCT-US03-27520-1
PCT-US03-30374-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PCT-US01-32233A-23
PCT-US01-44737-36
PCT-US02-10873A-574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PCT-US03-19360-87
PCT-US03-19360-88
                                                                                                                                                                                                                                                                                                  ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      303-19360-222
303-19360-223
303-26491-516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3699-1
                                                                                                                                                                                                                                                                                                                                                                                 Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Description
                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                     8 10, Apple 6 2, Apple 7 2, Apple
                                                                                                                                                                                                                                                                               RESULT 3
PCT-US01-01411A-62/c
                                                                                                                                                                                                                                                                                                                                         뮍
                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: Par
; SEQ ID NO 53
rengTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                       PCT-US00-17507-53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 2
PCT-US00-17507-53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                     Sequence 62, Application PC/TUS0101411A GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 20; Conserv
                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 53, Applica GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: PCT/US00/17507
CURRENT FILING DATE: 2000-06-26
PRIOR APPLICATION NUMBER: 09/344,667
PRIOR FILING DATE: 1999-06-25
PRIOR APPLICATION NUMBER: 60/200,161
PRIOR FILING DATE: 2000-04-26
NUMBER OF SEQ ID NOS: 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Mirkin, Chad A.
APPLICANT: Letsinger, Robe
APPLICANT: Mucic, Robert C
     TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 20
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity 100.0%;
nes 20; Conservative (
                                                                                                                                                                                                                                                                                                                                                        1799 AAAAAAAAAAAAAAAAAAA 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2072 GTTGCACTCCAGCCTGGGCG 2091
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GTTGCACTCCAGCCTGGGCG 20
                                                                                                                                                                                                                                                                                                                                         AAAAAAAAAAAAAAAAA 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PatentIn Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Application PC/TUS0017507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0.7%;
                                                                                                                                                                                                                                                                                                                                                                                         0.7%; Score 20; DB
100.0%; Pred. No. 6.9
ive 0; Mismatches
```

```
APPLICANT: Isis Pharmaceuticals, Inc.
APPLICANT: Brett P. Monia
APPLICANT: Robert McKay
APPLICANT: Madeline M. Butler
APPLICANT: Madeline M. Butler
APPLICANT: Madeline M. Butler
ITITLE OF INVENTION: ANTISENSE MODULATION OF GLYCOGEN SYNTHASE KINASE 3 AI
TITLE OF INVENTION: EXPRESSION
FILE REFERENCE: RTSQ-0096
CURRENT APPLICATION NUMBER: PCT/US01/01411A
CURRENT FILING DATE: 2001-01-16
PRIOR APPLICATION NUMBER: 09/488,856
PRIOR APPLICATION NUMBER: 09/488,856
PRIOR APPLICATION SYNTHEM PRIOR PRIVATE 2000-01-21
NUMBER OF SEQ ID NOS: 88
SEQ ID NO 62
LENGTH: 20
TYPER: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; OTHER INFORMATION: Description of Artificial Sequence: primer PCT-US00-07938-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Leteinger, Robert L.
APPLICANT: Mucic, Robert C.
APPLICANT: Storhoff, James J.
APPLICANT: Storhoff, James J.
APPLICANT: Elghanian, Robert
APPLICANT: Taton, Thomas A.
TITLE OF INVENTION: NANOPARTICLES HAVING OLIGONUCLEOTIDES ATTACHED THERETO
TITLE OF INVENTION: AND USES THEREFOR
TITLE OF INVENTION: AND USES THEREFOR
TITLE REFERENCE: 4149-1-1-1-1-PCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OTHER INFORMATION: Description of Artificial Sequence:random OTHER INFORMATION: synthetic sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; Score 20; DB
%; Pred. No. 6.9
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 1; Le
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 1; L
6.9e+06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                      ALPHA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
δ
                                                                                               ; OTHER INFORMATION: Antisense Oligonucleotide PCT-US01-30871-70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; OTHER INFORMATION: Antisense Oligonucleotide PCT-US01-01411A-62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PCT-US01-15774-82/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PCT-US01-15774-82
                                                                                                                                                                   SEQ ID NO 70
LENGTH: 20
TYPE: DNA
                                               Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 70, Application PC/TUS0130871 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS: 108
SEQ ID NO 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: PCT/US01/30871
CURRENT FILING DATE: 2001-10-03
PRIOR APPLICATION NUMBER: 09/679,299
PRIOR FILING DATE: 2000-10-04
NUMBER OF SEQ ID NOS: 164
                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Isis Pharmaceuticals, Inc.
APPLICANT: Brett P. Monia
APPLICANT: William Gaarde
APPLICANT: Susan M. Freier
APPLICANT: Edward V. Wancewicz
TITLE OF INVENTION: ANTISENSE MODULATION OF
                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Isis Pharmaceuticals, Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT FILING DATE: 2001-05-15
PRIOR APPLICATION NUMBER: 09/572,423
PRIOR FILING DATE: 2000-05-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: PCT/US01/15774
CURRENT FILING DATE: 2001-05-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILE REFERENCE: ISPH-0568
                                                                                                                                                                                                                                                                                                                                           PPLICANT:
                                                                                                                                  FEATURE:
                                                                                                                                                ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OTHER INFORMATION: Antisense Oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
                                                                                                                                                                                                                                                                                                 PEICANT: Andrew T. Watt
TTLE OF INVENTION: ANTISENSE MODULATION OF CASPASE 6 EXPRESSION
TERFFERENCE: RTSP-0192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
1852 CTGTAATCCCAGCACTTTGG 1871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1846 TCACGCCTGTAATCCCAGCA 1865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1854 GTAATCCCAGCACTTTGGGA 1873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20 TCACGCCTGTAATCCCAGCA 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20 GTAATCCCAGCACTTTGGGA 1
                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                       Vickie L. Brown-Driver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Application PC/TUS0115774
                               0.7%; Score 20; DB larity 100.0%; Pred. No. 6. Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0.7%; Score 20; DB 1;
00.0%; Pred. No. 6.9e+0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 20; DB 1; L; Pred. No. 6.9e+06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .
•
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                DB 1; Le
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6.9e+06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TERT
                                 0
                                                             Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EXPRESSION
                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                             <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
밁
                                                                    Ś
                                                                                                                                                                                                                                                                                   PCT-US01-44737-36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PCT-US01-44737-36/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PCT-US01-32233A-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PCT-US01-32233A-23/c
                                                                                                                                           Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 36
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 23
LENGTH: 20
                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 23, Application PC/TUS0132233A GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: Polymucleotides Useful for Modulating Transcription FILE REFERENCE: 023070-1147109C CURRENT APPLICATION NUMBER: PCT/US01/44737 CURRENT FILING DATE: 2002-08-28 PRIOR APPLICATION NUMBER: US 09/724,857 PRIOR PRIOR DATE: 2000-11-28 PRIOR FILING DATE: 2000-11-28 PRIOR APPLICATION NUMBER: US 60/253,672 PRIOR APPLICATION NUMBER: US 60/253,672 PRIOR APPLICATION NUMBER: US 60/253,672 PRIOR PILING DATE: 2000-11-28 PRIOR FILING DATE: 2000-11-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 36, Application PC/TUS0144737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Weterings, Koen
APPLICANT: Apuya, Nestor I
APPLICANT: Tatarinova, Ta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: PCT/US01/32233A
CURRENT FILING DATE: 2001-10-16
PRIOR APPLICATION NUMBER: US 09/688,566
PRIOR FILING DATE: 2000-10-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: PROTEIN SCAFFOLDS FOR ANTIBODY MIMICS TITLE OF INVENTION: AND OTHER BINDING PROTEINS FILE REFERENCE: 50036/021W04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Phylos, Inc
                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQ ID NOS: 202
                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION: Description of Artificial Sequence:oligo(dT-20)OTHER INFORMATION: primer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 20
TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                    1799 ААААЛААААААААААААА 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1799 АЛАЛАЛАЛАЛАЛАЛАЛАЛ 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20
20 AAAAAAAAAAAAAAAAA 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20
                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAAAAAAAAAAAAAAAA 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGTAATCCCAGCACTTTGG 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tatarinova, Tatiana
Goldberg, Robert B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ceres,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The Regents of the University of California
                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nestor R
                                                                                                                                                                          0.7%; Score 20;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 20;
Pred. No.
                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                          DB 1; L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 1; L
6.9e+06;
                                                                                                                                                                                                            Length 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 20;
                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

RESULT 8 PCT-US02-10873A-574

```
ద
                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                       PCT-US02-18229-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PCT-US02-18229-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PCT-US02-10873A-574
                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS: 35
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 5
LENGTH.
                                                                                           Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 5, Application:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Saigene Corporation
TITLE OF INVENTION: Nucleic Acid Amplification Utilizing Intermediate
TITLE OF INVENTION: Duplexes
FILE REFERENCE: 018048-001711PC
CURRENT APPLICATION NUMBER: PCT/US02/18229
CURRENT FILING DATE: 2002-01-07
                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: US 60/296,812
PRIOR FILING DATE: 2001-06-07
PRIOR APPLICATION NUMBER: US 10/077,383
PRIOR FILING DATE: 2002-02-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Haydock, Paul V. APPLICANT: U'Ren, Jack APPLICANT: Saigene Corpora
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOPTWARE: PatentIn version 3.1
SEQ ID NO 574
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: PCT/US02/10873A
CURRENT FILING DATE: 2002-12-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Brayden, David J. APPLICANT: Byrne, Daragh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/281,416
PRIOR FILING DATE: 2001-04-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQ ID NOS: 859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE: OTHER INFORMATION: Real-time validation FOR primer
                                                                                                                                                             NAME/KEY: modified_base
LOCATION: (13)..(20)
OTHER INFORMATION: a at positions 13-20 may be present or
                                                                                                                                                                                                                                           OTHER INFORMATION: Description of Artificial Sequence: (A)-12-20
OTHER INFORMATION: homopolymer spacer sequence
                                                                                                                                                                                                                                                                                                     ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
                                                                                                                                                                                                                                                                                         FEATURE:
                                                                                                                                                                                                                                                                                                                                                 ENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LICANT: Mah, Steven P.
LICANT: Lo, David D.
LE OF INVENTION: Genes Expressed in Intestinal Epithelium and Peyer's Patch M Cel:
E REFERENCE: 216019-109
                                                                                                                                                                                                                                                                                                                               PE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
les 20; Conserv
                               1799 АЛАЛАЛАЛАЛАЛАЛАЛА 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1845 CTCACGCCTGTAATCCCAGC 1864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION:
                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTCACGCCTGTAATCCCAGC 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application PC/TUS0218229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  O'Mahony, Daniel J
Evans, Claire F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application PC/TUS0210873A
                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0.7%;
                                                                                           0.7%;
                                                                       0
                                                                       Score 20; DB
Pred. No. 6.9
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 20;
Pred. No.
                                                                                         DB 1; L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6.9e+06;
                                                                                                         Length 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  for EDD1S_87
                                                                                                                                                                     absent
                                                                       0
                                                                       Gaps
                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

```
멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PCT-US02-18229-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 10
PCT-US02-18229-6/c
                                                                                                                                                                                                                                           PCT-US02-33002-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PCT-US02-33002-2/c
                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 6, Application PC/TUS0218229 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 2,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: U'Ren, Jack
APPLICANT: Saigene Corporation
ITILE OF INVENTION: Nucleic Acid Amplification Utilizing Intermediate
TITLE OF INVENTION: Duplexes
FILE REPERENCE: 018048-001711PC
CURRENT APPLICATION NUMBER: PCT/US02/18229
CURRENT FILING DATE: 2002-01-07
PRIOR APPLICATION NUMBER: US 60/296,812
PRIOR APPLICATION NUMBER: US 10/077,383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILE REFERENCE: 2605-1-002PCT
CURRENT APPLICATION NUMBER: PCT/US02/33002
CURRENT FILING DATE: 2002-10-16
PRIOR APPLICATION NUMBER: US 10/036,860
PRIOR FILING DATE: 2001-10-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR FILING DATE: 2002-02-15
NUMBER OF SEQ ID NOS: 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Haydock, Paul V.
APPLICANT: U'Ren, Jack
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: US 60/305,666 PRIOR FILING DATE: 2001-07-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Serafini, APPLICANT: Chen, Ha APPLICANT: Toemel,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQ ID NOS: 42
                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OTHER INFORMATION: t at positions 13-20 may be present or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE: modified base LOCATION: (13)..(20)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OTHER INFORMATION: Description of Artificial Sequence: (T)-12-20 OTHER INFORMATION: homopolymer spacer sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                        OTHER INFORMATION: synthetic sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                     ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRICANT: Toemel, Emily
PRICANT: Ellis, Michael
PRICANT: Ellis, Michael
PRICANT: Ellis, Michael
PRICANT: Toemel, Emily
PRICANT: Toemel, Em
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                       Local
1799 АДАДАДАДАДАДАДАДАДАД 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1799 ААЛАЛАЛАЛАЛАЛАЛАЛ 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20 AAAAAAAAAAAAAAAAAA 1
                                                                          l Similarity
20; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PatentIn Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Application PC/TUS0233002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chen, Hang
                                                                              Conservative
                                                                                                                   100.0%;
                                                                              o
;-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 20;
                                                                                                               Score 20;
Pred. No.
                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1; Le
                                                                                                                   6.9e+06;
                                                                                                                                                Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 20
                                                                          <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                      Gaps
                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

```
밁
                                                                      PCT-US02-38281-266
                                                                                           RESULT 14
                                                                                                                                               뮍
                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PCT-US02-35719-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PCT-US02-33699-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PCT-US02-33699~1/c
                                                                                                                                                                                                                                                                                          OTHER INFORMATION: primer 
CT-US02-35719-13
           Sequence 266, Application PC/T
GENERAL INFORMATION:
APPLICANT: Loren J. Miraglia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: PatentIn version 3.2 SEQ ID NO 1
                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: PatentIn version 3.1 SEQ ID NO 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 13, Application PC/TUS0235719 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1, Application PC/TUS0233699 GENERAL INFORMATION:
                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Proligo, LLC
TITLE OF INVENTION: NUCLEIC ACID PROBES AND METHODS TO DETECT AND/OR QUANTIFY NUCLEIC
TITLE OF INVENTION: ACID ANALYTES
FILE REFERENCE: PRO.07/PCT
CURRENT APPLICATION NUMBER: PCT/US02/33699
CURRENT FILING DATE: 2002-10-21
PRIOR APPLICATION NUMBER: 60/336,432
PRIOR APPLICATION NUMBER: 60/336,432
PRIOR FILING DATE: 2001-10-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Wood, Linda
APPLICANT: Wagner, Susanne
APPLICANT: Parodi, Luis
TITLE OF INVENTION: Single Nucleotide Polymorphisms in GH-1
FILE REFERENCE: 00791.US1
                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: PCT/US02/35719
CURRENT FILING DATE: 2002-11-07
NUMBER OF SEQ ID NOS: 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS: 14
                                                                                                                                                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: misc_feature LOCATION: (1). (20)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA
                                                                                                                                                                                                                                                                                                                                            ORGANISM: artificial sequence
                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OTHER INFORMATION: Synthetic Nucleic Acid Probe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Artificial FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                 ENGTH: 20
                                                                                                                                                                               1852 CTGTAATCCCAGCACTTTGG 1871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1799 АЛАЛАЛАЛАЛАЛАЛАЛАЛ 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20 AAAAAAAAAAAAAAAAAA 1
                                                                                                                                                                                                                   L Similarity
20; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20;
Pamela S. Nero
                                                      Application PC/TUS0238281
                                                                                                                                                                                                                 0.7%; So ilarity 100.0%; I Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; +-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 %; Score 20; DB
%; Pred. No. 6.9
0; Mismatches
                                                                                                                                                                                                                                   Score 20;
                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6.9e+06;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 1;
                                                                                                                                                                                                                                  6.9e+06;
                                                                                                                                                                                                                                                      DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 20;
                                                                                                                                                                                                                                                  Length 20;
                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
Query Match
Best Local Similarity
Watches 20; Conserv:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 15
PCT-US02-38281-267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                        ; OTHER INFORMATION: Antisense Oligonucleotide
PCT-US02-38281-267
                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: US 10/005,344
PRIOR FILLING DATE: 2001-12-04
PRIOR PELICATION NUMBER: US 09/752,983
PRIOR FILLING DATE: 2001-01-02
PRIOR APPLICATION NUMBER: US 09/280,805
PRIOR APPLICATION NUMBER: US 09/280,805
PRIOR FILLING DATE: 1999-03-26
PRIOR PELICATION NUMBER: US 09/048,810
PRIOR FILLING DATE: 1998-03-26
NUMBER OF SEQ ID NOS: 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; OTHER INFORMATION: Antisense Oligonucleotide
PCT-US02-38281-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: PCT/US02/38281
CURRENT FILING DATE: 2002-12-02
PRIOR APPLICATION NUMBER: US 10/005,344
PRIOR FILING DATE: 2001-12-04
PRIOR APPLICATION NUMBER: US 09/752,983
PRIOR FILING DATE: 2001-01-02
PRIOR APPLICATION NUMBER: US 09/280,805
PRIOR APPLICATION NUMBER: US 09/280,805
PRIOR APPLICATION NUMBER: US 09/048,810
PRIOR APPLICATION NUMBER: US 09/048,810
PRIOR FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 267, Applica GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQ ID NOS: 379
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 266
                                                                                                                                                                                                                                SEQ ID NO 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Ming Yi Chiang
APPLICANT: Muthiah Manoharan
APPLICANT: Isis Pharmaceuticals, Inc.
TITLE OF INVENTION: Antisense Modulation of Human mdm2 Expression
TILE REFERENCE: ISPH-0717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS: 379
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: PCT/US02/38281
CURRENT FILING DATE: 2002-12-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Loren J. Miraglia APPLICANT: Pamela S. Nero
                                                                                                                                                      TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PPLICANT: Ming Yi Chiang
PPLICANT: Muthiah Mancharan
PPLICANT: Isis Pharmaceuticals, Inc.
TILE OF INVENTION: Antisense Modulation of Human mdm2 Expression
ILE REFERENCE: ISPH-0717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                               ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
nes 20; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1858 TCCCAGCACTTTGGGAGGCC 1877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mark J. Graham
Brett P. Monia
Erich Koller
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application PC/TUS0238281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Brett
                 0.7%; Solitarity 100.0%; I Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P. Monia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             2002-12-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 20;
Pred. No.
                                       Score 20; DB 1; I
Pred. No. 6.9e+06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 1; L, 6.9e+06;
                                                        Length 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
```

Mismatches

Indels

0

Gaps

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Run
                                                                                                                                                                                                                                                                                                                                                                                        Database
                                                                                                                                                                                                                                                                                                                                                                                                                        Minimum DB seq length: 0 Maximum DB seq length: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                       Post-processing: Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Word size :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence:
      0 0 0 0 0 0
                                                          0 0 0 0 0 0
                                                                                                                                     00000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                            Score
    Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OLIGO_NUC
Gapop 60.0 , Gapext 60.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 March 7, 2004, 15:07:23 ; Search time 94 Seconds (without alignments) 6400.467 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-966-880A-7
2818
                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     211252 seqs, 106750167 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
   В
                                                             PCT-U804-04452-51

PCT-U804-04452-1813

US-10-653-416-25

US-10-708-204-5116

US-09-574-779B-30

US-110-708-204-5092

US-110-708-204-3825

US-110-708-204-3825

US-110-708-204-3825

US-110-708-204-3825

US-110-708-204-3826

US-110-708-204-3854

US-110-708-204-3854

US-110-708-204-5094

US-110-708-204-5094

US-110-708-204-5094

US-110-708-204-5094

US-110-708-204-5094
                                                                                                                                                                                                                                            占
                                                      PCT-US04-04452-253
                                                                                                                                                                                                                                                                      SUMMARIES
                                                                                                                                        Sequence 51, Appl
Sequence 25, Appl
Sequence 23, Appl
Sequence 5116, Ap
Sequence 50, Appl
Sequence 502, Appl
Sequence 26, Appl
Sequence 3825, Ap
Sequence 3825, Ap
Sequence 5130, Ap
Sequence 5130, Appl
Sequence 50, Appl
Sequence 282, Appl
Sequence 3868, Ap
Sequence 3854, Ap
Sequence 5172, Ap
Sequence 5094, Ap
Sequence 5101, Ap
Sequence 25101, Ap
Sequence 25101, Ap
Sequence 3841, Ap
Sequence 3841, Ap
Sequence 3841, Ap
Sequence 3842, Ap
Sequence 3842, Ap
Sequence 3842, Ap
                                                                                                                                                                                                                                          Description
                                                                                                                                                                                        맑
                                                                                                                                                                                                       $
                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 1
PCT-US04-04452-51/c
                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 51, Application PC/TUS0404452 GENERAL INFORMATION:
```

		ი		a	a			O			U		a	O	G	ი	a		
45	44	43	42	41	40	39	38	37	36	35	34	ယ ယ	32	31	30	29	28	27	
13	13	13	13	13	13	13	13	13	14	14	14	14	15	15	15	15	15	15	
0.5									٠			-							
20	20	20	20	19	19	18	17	17	20	19	19	14	20	20	20	20	20	20	
9	ഗ	Н	ب	σ	-	۲	ب	μ	თ	Ъ	Н	თ	σ	σ	σ	μ	Ь	_ 4	
US-10-484-805-9	US-09-574-779B-15	PCT-US04-04452-1667	PCT-US04-02344-110	US-10-708-204-3140	PCT-US03-02038-164	PCT-US03-32805-22	PCT-US03-31862-104	PCT-US03-31862-103	US-10-769-579-2	PCT-US04-04452-1367	PCT-US04-04452-460	US-10-141-535-2	US-10-708-204-5144	US-10-708-204-4471	US-10-708-204-3210	PCT-US04-04452-642	PCT-US04-04452-546	PCT-US04-04452-117	
9		Sequence 1667, Ap	Sequence 110, App	Sequence 3140, Ap	Sequence 164, App	Sequence 22, Appl	Sequence 104, App	Sequence 103, App	Sequence 2, Appli	Sequence 1367, Ap	Sequence 460, App	2	-	Sequence 4471, Ap	,0	Sequence 642, App	Sequence 546, App	Sequence 117, App	

ALIGNMENTS

```
PCT-US04-04452-1813/c

PCT-US04-04452-1813/c

Sequence 1813, Application PC/TUS0404452

GEMERAL INFORMATION:

APPLICANT: Bardelli, Alberto
APPLICANT: Velculescu, Victor
APPLICANT: Velculescu, Victor
APPLICANT: Vinzler, Kenneth W.
APPLICANT: Vogelstein, Bert
ITILE OF INVENTION: TYROSINE KINASES IMPLICATED IN CANCERS
FILE REFERENCE: 001107-00327

CURRENT APPLICATION NUMBER: PCT/US04/04452

CURRENT FILING DATE: 2004-02-18

NUMBER OF SEQ ID NOS: 2191

SOPTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 1813

LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; TYPE: DNA; Homo sapiens PCT-US04-04452-51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 0.7%; Score 20; DB Best Local Similarity 100.0%; Pred. No. 54 Matches 20; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQ ID NOS: 2191
SOFTWARE: FASCSEQ for Windows Version 4.0
SEQ ID NO 51
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Bardelli, Alberto
APPLICANT: Parsons, Will
APPLICANT: Velculescu, Victor
APPLICANT: Victor
APPLICANT: Kinzler, Kenneth W.
APPLICANT: Vogelstein, Bert
TITLE OF INVENTION: TYROSINE KINASES IMPLICATED IN CANCERS
FILE REFERENCE: 001107.00327
CURRENT APPLICATION NUMBER: PCT/US04/04452
CURRENT FILING DATE: 2004-02-18
TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1901 CAGGAGTTTGAGACCAGCCT 1920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20 CAGGAGTTTGAGACCAGCCT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
```

0

PCT-US04-04452-1813

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: oligonucleotide
US-10-653-416-25
                                                                                               PRIOR APPLICATION NUMBER: 60/310,285
PRIOR FILING DATE: 2001-08-06
NUMBER OF SEQ ID NOS: 23
SOFTWARE: PatentIn Ver. 3.2
SEQ ID NO 23
SEQ ID NO 23
                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 23, Application US/10213257 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQ ID NOS: 26
SOFTWARE: PatentIn Ver. 3.2
SEQ ID NO 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 25, Application US/10653416 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                     TITLE OF INVENTION: IMMUNO-MODULATING ANTITUMOR ACTIVITIES OF GANODERNA TITLE OF INVENTION: LUCIDUM (REISHI) POLYSACCHARIDES FILE REFERENCE: 4910-12 CURRENT APPLICATION NUMBER: US/10/213,257 CURRENT FILING DATE: 2002-08-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: RASHTCHIAN, AYOUB
APPLICANT: SCHUSTER, DAVID M.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR CDNA SYNTHESIS
FILE REFERENCE: 38266-0011
                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/10/653,416
CURRENT FILING DATE: 2003-09-03
PRIOR APPLICATION NUMBER: 60/407,248
PRIOR FILING DATE: 2002-09-03
                                                                                                                                                                                                                                                                                  APPLICANT
                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
OTHER INFORMATION: Description of Artificial Sequence: Synthetic OTHER INFORMATION: primer
                                   FEATURE:
                                                  ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1799 АЛАЛАЛАЛАЛАЛАЛАЛАЛ 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1854 GTAATCCCAGCACTTTGGGA 1873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20 AAAAAAAAAAAAAAAAA 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                  CHEN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                N, SHUI-TEIN
, CHUN-CHENG
G, CHI-HUEY
                                                                                                                                                                                                                                                                                                             CHUN-HUNG
                                                                                                                                                                                                                                                                                                                                                                                                   YUAN-YUAN
                                                                                                                                                                                                                                                                                YOW-FU
                                                                                                                                                                                                                                                                                                HONG-SEN
                                                                                                                                                                                                                                                                                                                                                                                   KAY-HOOD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1;
54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
밁
                               ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; TYPE: RNA
; ORGANISM: Homo Sapiens
US-10-708-204-5116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 5
US-10-708-204-5116/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                      US-09-574-779B-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-574-779B-30/c
                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 99201543.8
PRIOR ETILING DATE: 1999-05-17
NUMBER OF SEQ ID NOS: 158
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 30
                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 30, Application US/09574779B
GENERAL INFORMATION:
APPLICANT: VLAAMS INTERUNIVERSITAIR INSTITUUT VOOR BIOTECHNOL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILE REFERENCE: 55033
CURRENT APPLICATION NUMBER: US/10/708,204
CURRENT FILING DATE: 2004-02-16
NUMBER OF SEQ ID NOS: 7351
SOFTWARE: PatentIn version 3.2
SEQ ID NO 5116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                               Best Local Similarity Matches 19; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 5116, Application US/10708204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/09/574,779B CURRENT FILING DATE: 2000-05-19
                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: Novel cDNAs encoding catenin-binding proteins with TITLE OF INVENTION: function in signalling and/or gene regulation FILE REFERENCE: 2676-4415US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: ROSETTA GENOMICS LTD
TITLE OF INVENTION: BIOINFORMATICALLY DETECTABLE GROUP OF NOVEL REGULATORY
TITLE OF INVENTION: OLIGONUCLECTIDES ASSOCIATED WITH ALZHEIMER'S DISEASE AND USES
TITLE OF INVENTION: THEREOF
                                                                                                                                                                   ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                    OTHER INFORMATION: Description of Artificial Sequence:
                                                                                                                                                                                                      TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ENGTH: 20
                     1846 TCACGCCTGTAATCCCAGC 1864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1799 AAAAAAAAAAAAAAAAAA 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2068 TGCCGTTGCACTCCAGCCTG 2087
19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20 TGCCGTTGCACTCCAGCCTG 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20;
                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0.7%;
                                                                                   100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0.7%; Score 20;
100.0%; Pred. No.
                                                                                                 0.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 20; Pred. No.
                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
                                                                                 Score 19;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 6;
                                                                                                 DB 5;
                                                                                   1.3e+02
                                                                                                 Length 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                    primer FVR510F
                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

RESULT 7 US-10-708-204-5092/c

Sequence 5092, Application US/10708204 GENERAL INFORMATION:

APPLICANT: ROSETTA GENOMICS LTD

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-653-416-26/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-708-204-5092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-708-204-3825/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 26, Application US/10653416
GENERAL INFORMATION:
APPLICANT: RASHTCHIAN, AYOUB
APPLICANT: SCHUSTER, DAVID M.
TITLE OF INVENTION: COMPOSITIONS AND METHODS
EXIT PROPERTY OF THE PROPERT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: PatentIn version 3.2
SEQ ID NO 5092
LENGTH: 20
                                                                                                                                                                                                                                                               Sequence 3825, Application US/10708204
GENERAL INFORMATION:
APPLICANT: ROSETTA GENOMICS LTD
TITLE OF INVENTION: BIOINFORMATICALLY DETECTABLE GROUP OF NOVEL REGULATORY
TITLE OF INVENTION: OLIGONUCLECTIDES ASSOCIATED WITH ALZHEIMER'S DISEASE AND USES
TITLE OF INVENTION: THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
SEQ ID NO 3825
LENGTH: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: Pa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/10/708,204
CURRENT FILING DATE: 2004-02-16
NUMBER OF SEQ ID NOS: 7351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -10-653-416-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: BIOINFORMATICALLY TITLE OF INVENTION: OLIGONUCLECTIDES TITLE OF INVENTION: THEREOF
                                                                      CURRENT APPLICATION NUMBER: US/10/708,204
CURRENT FILLING DATE: 2004-02-16
NUMBER OF SEQ ID NOS: 7351
SOFTWARE: PatentIn version 3.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/10/653,416
CURRENT FILING DATE: 2003-09-03
PRIOR APPLICATION NUMBER: 60/407,248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILE REFERENCE: 55033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR FILING DATE: 2002-09-03
NUMBER OF SEQ ID NOS: 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILE REFERENCE: 38266-0011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: RNA
ORGANISM: Homo Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OTHER INFORMATION: this sequence may encompass 12-18 nucleotides according OTHER INFORMATION: to the specification as filed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OTHER INFORMATION: Description of Artificial Sequence: Synthetic OTHER INFORMATION: oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                       REFERENCE: 55033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1799 AAAAAAAAAAAAAAAAA 1816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2072 GTTGCACTCCAGCCTGGGC 2090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20 GITGCACTCCAGCCTGGGC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PatentIn Ver.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0.6%; Score 18;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 19;
; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        °.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DETECTABLE GROUP OF NOVEL REGULATORY
ASSOCIATED WITH ALZHEIMER'S DISEASE AND USES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 6; Li
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FOR CDNA SYNTHESIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

```
; TYPE: RNA; Homo Sapiens US-10-708-204-3825
                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 11
PCT-US03-25997A-50/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; TYPE: RNA; Homo Sapiens US-10-708-204-5130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 10
US-10-708-204-5130/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                PCT-US03-25997A-50
                                                                                                                                                                                                                      TITLE OF INVENTION: NUCLEOTIDE SEQUENCES AND POLYPEPTIDES
TITLE OF INVENTION: INCREASING PLANT SIZE AND INCREASING
FILE REFERENCE: 2750-1573F(PC)
CURRENT APPLICATION NUMBER: PCT/US03/25997A
CURRENT FILING DATE: 2003-08-18
NUMBER OF SEQ ID NOS: 50
SOCTWARE: Patentin version 3.0
SEQ ID NO 50
LENGTH: 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                          Sequence 50, Application PC/TUS0325997A
GENERAL INFORMATION:
APPLICANT: CERES, INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PILE REFERENCE: 55033
CURRENT APPLICATION NUMBER: US/10/708,204
CURRENT FILING DATE: 2004-02-16
NUMBER OF SEQ ID NOS: 7351
SOFTWARE: PatentIn version 3.2
SEQ ID NO 5130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 5130, Application US/10708204 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: ROSETTA GENOMICS LTD
TITLE OF INVENTION: BIOINFORMATICALLY DETECTABLE GROUP OF NOVEL REGULATORY
TITLE OF INVENTION: OLIGONUCLECTIDES ASSOCIATED WITH ALZHEIMER'S DISEASE AND USES
TITLE OF INVENTION: THEREOF
                                                                                                                                                                               TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                             OTHER INFORMATION: Oligo primer used in the generation of OTHER INFORMATION: hybridization from first-strand cDNA
                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2075 GCACTCCAGCCTGGGCGA 2092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1912 GACCAGCCTGGCCAACAT 1929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          81
18
                                                              18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                              AAAAAAAAAAAAAAAAAA 1816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
                                                                           0.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 18;
Pred. No.
                                                                             Score 18;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 18;
Pred. No.
                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                             DB 1; L
. 3.2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 6; L; 3.2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3.2e+02;
                                                                                           Length 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 18
                                                                Indels
                                                                                                                                                                                                                                                                                                                                             THE NUMBER AND SIZE OF
                                                                                                                                                            labeled probes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

RESULT 12 PCT-US04-04452-252

```
RESULT 13
US-10-708-204-2896
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                               RESULT 14
US-10-708-204-3868/c
                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: RNA
ORGANISM: Homo Sapiens
US-10-708-204-2896
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; TYPE: DNA
; ORGANISM: Homo sapiens
PCT-US04-04452-252
SEQUENCE 3868, Application US/10708204

SEQUENCE 1 INFORMATION:

APPLICANT: ROSETTA GENOMICS LTD

TITLE OF INVENTION: BIOINFORMATICALLY DETECTABLE GROUP OF NOVEL REGULATORY

TITLE OF INVENTION: OLIGONUCLEOTIDES ASSOCIATED WITH ALZHEIMER'S DISEASE AND USES

TITLE APPRICATION NUMBER: US/10/708,204

CURRENT APPLICATION NUMBER: US/10/708,204

CURRENT FILING DATE: 2004-02-16

NUMBER OF SEQ ID NOS: 7351

SOFTWARE: Patentin version 3.2

SEQ ID NO 3868

LENGTH: 20

TYPE: RNA

ORGANISM: Homo Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 2896, Application US/10708204
SEQUENCE 2896, Application US/10708204
GENERAL INFORMATION:
APPLICANT: ROSETTA GENOMICS LTD
APPLICANT: ROSETTA GENOMICS LTD
TITLE OF INVENTION: BIOINFORMATICALLY DETECTABLE GROUP OF NOVEL REGULATORY
TITLE OF INVENTION: OLIGONUCLECTIDES ASSOCIATED WITH ALZHEIMER'S DISEASE AND USES
TITLE OF INVENTION: THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/10/708,204
CURRENT FILING DATE: 2004-02-16
NUMBER OF SEQ ID NOS: 7351
SOFTWARE: Patentin version 3.2
SEQ ID NO 2896
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: PCT/US04/04452
CURRENT FILING DATE: 2004-02-18
NUMBER OF SEQ ID NOS: 2191
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 252
LENGTH: 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 252, Application PC/TUS04044452 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Velculescu, Victor
APPLICANT: Kinzler, Kenneth W.
APPLICANT: Vogelstein, Bert
TITLE OF INVENTION: TYROSINE KINASES IMPLICATED IN CANCERS
FILE REFERENCE: 001107.00327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Bardelli, Alberto
APPLICANT: Parsons, Will
APPLICANT: Velculescu, Victo
APPLICANT: Kinzler, Kenneth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
les 13; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2008 AGGCTGAGGCAGGAGAAT 2025
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1851 CCTGTAATCCCAGCACTT 1868
                                                                                                                                                                                                                                                                                                                                                                                                                     1 CCUGUAAUCCCAGCACUU 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGGCTGAGGCAGGAGAAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0.6%; Score 18; DB 1;
100.0%; Pred. No. 3.2e+0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 18; DB 6;
Pred. No. 3.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3.2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>.</u>
```

```
CURRENT APPLICATION NUMBER: US/10/708,204
CURRENT FILING DATE: 2004-02-16
NUMBER OF SEQ ID NOS: 7351
SOFTWARE: PatentIn version 3.2
SEQ ID NO 3854
LENGTH: 19
TYPE: RNA
ORGANISM: Homo Sapiens
US-10-708-204-3854
Search completed: March Job time: 94 secs
                                                            밁
                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 15
US-10-708-204-3854/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-708-204-3868
                                                                                                                                                                                                                                                                                                                                  Sequence 3854, Application US/10708204
GENERAL INFORMATION:
APPLICANT: ROSETTA GENOMICS LTD
TITLE OF INVENTION: BIOINFORMATICALLY
TITLE OF INVENTION: OLIGONUCLECTIDES
TITLE OF INVENTION: THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 18; Conserv
                                                                                                                   Query Match 0.6
Best Local Similarity 100.
Matches 17; Conservative
                                                                                                                                                                                                                                                                                                                         FILE REFERENCE: 55033
                                                                                          2074 TGCACTCCAGCCTGGGC 2090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2074 TGCACTCCAGCCTGGGCG 2091
                                                             17 TGCACTCCAGCCTGGGC 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18 TGCACTCCAGCCTGGGGG 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0.6%; U-
100.0%; Prr
               7, 2004, 22:43:56
                                                                                                                                      100.0%;
                                                                                                                                                      0.6%;
                                                                                                                                      Score 17; ; Pred. No.

 Mismatches

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 18;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                       DETECTABLE
ASSOCIATED
                                                                                                                                      DB 6; L
. 7.6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 6; Lt 3.1e+02;
                                                                                                                                                    Length 19;
                                                                                                                                                                                                                                                                                                                                                       GROUP OF NOVEL REGULATORY WITH ALZHEIMER'S DISEASE AND USES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ç
                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
```

```
Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OM nucleic -
                                                                                                                                                                                                                                                                                                                                                                                                       Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Word size
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                               Post-processing: Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            91:
                                                                                                                                                                                                                                                                                                                                                                                                                                                          seq length: 0
seq length: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OLIGO_NUC
Gapop 60.0 , Gapext 60.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-966-880A-7
2818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            March
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      27513289 seqs, 14931090276 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                                                                      gb_est1: *
gb_est2: *
gb_htc: *
gb_est3: *
gb_est4: *
                                                                                                                                                                                                                                                                                                                                                             em_esthum:*
em_estin:*
em_gss_pro:*
em_gss_rod:*
em_gss_phg:*
em_gss_vrl:*
gb_gssl:*
gb_gssl:*
                                                                                 em_gss_hum:*
em_gss_inv:*
em_gss_pin:*
em_gss_fun:*
em_gss_fun:*
em_gss_mam:*
                                                                                                                                                                                                                                                                                           em_estro:*
em_htc:*
                                                                                                                                                                                                                                                                                                                      em_estpl:*
                                                                                                                                                                                                                                                                                                                                    em_estov:*
                                                                                                                                                                                                                                                                                                                                                  em_estmu:*
                                                                                                                                                                                                                                                                                                                                                                                         em_estba:*
                                                                                                                                                                                              gb_est5:*
em_estfun:*
                                                                                                                                                                              em_estom:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7, 2004, 14:30:57; Search time 7088 Seconds (without alignments) 11872.408 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8854
```

a

ALIGNMENTS

a a

11122222222222222222222444444444444444	11111111111111111111111111111111111111
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN	
000000000000000000000000000000000000000	
NNUNUNUNUNUNUNUNUNUNUNUNUNUNUNUNUNUNUN	
1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
	33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 33214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214 32214
	F282035 14ETL- F282414 14ETL- F29822 7LEAF- F301720 7LEAF- F301720 7LEAF- F310604 ABF0 F311366 HD01 F313569 HD01 F313569 HD03 F319133 HD03 F321721 HD13 F321731 HD13 F321731 HD13 F321731 HD17

0 0 0 0 0 0 0

000

000

```
RESULT 1
HSM002936 standard; mRNA; EST; 20 BP.
XX
AC AL038460;
XX
SV AL038460.1
XX
DT 12-MAR-1999 (Rel. 59, Created)
DT 12-MAR-1999 (Rel. 59, Last updated, V.
DE Homo sapiens mRNA; EST DKFZp566B2246_:
XX
DE Homo sapiens (human)
OC Eukaryota; Metazoa; Chordata; Craniat OC Eutheria; Primates; Catarrhini; Homin
XX
RN [1]
RP Ottenwaelder B., Obermaier B., Mewes
RT ;
Submitted (12-MAR-1999) to the EMBL/G
RL MIPS, Am Klopferspitz 18a D-82152 Mar
XX
CC Clone from S. Wiemann, sequenced by V
                                                      Submitted (12-MAR-1999) to the EMBL/GenBank/DDBJ databases. MIPS, Am Klopferspitz 18a D-82152 Martinsried, GERMANY
                                                                                                                                                                                                                                                                                                                                                        Homo sapiens mRNA; EST DKFZp566B2246_r1 (from clone DKFZp566B2246)
                                                                                                                         Ottenwaelder B., Obermaier B., Mewes W., Gassenhuber J., Wiemann
                                                                                                                                                                                                                                                                                                                                                                                                        (Rel. 59, Created)
(Rel. 59, Last updated, Version 1)
                                                                                                                                                                                                                      Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BP.
                                                                                                                              ŝ
```

Result

Score

Query Match Length DB

ij

Description

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Ω

2222

0.7

2222

HSM002936 HSM003226 D AW334823 4 CF280913

Al038460 Homo sapi Al038750 Homo sapi AW334823 S39F5 AGS CF280913 14ETL--07

Clone from S. Wiemann, sequenced by MediGenomix within the cDNA

```
HSM003226
ID HSM003226
XX AL038
XX AL038
XY AL038
XY AL038
XY AL038
XY EST;
XX EST;
XX EST;
XX I1-20
CC Euther
XX I1-20
RA Otten
RI Submi
RL MIPS,
XX CC Clone
CC Seque
CC Seque
CC Seque
CC Clone
CC Seque
CC Seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sl sequence also available This clone is available at the RZPD in Berlin Please contact the RZPD: Ressourcenzentrum, He Berlin-Charlottenburg, GERMANY; Email: clone@)
                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa;
Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                           sequencing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ottenwaelder B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens mRNA; EST DKFZp566M1146_r1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12-MAR-1999
12-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AL038750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HSM003226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequencing consortium of the German Genome Project
                                                                                                                                                                                                                                                             quencing consortion.

sequence also available
sequence also available at the RZPD in Berlin
is clone is available at the RZPD: Ressourcenzentrum, Heubnerwe
ease contact the RZPD: Ressourcenzentrum, Conserved.de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1797 ТСАЛАЛАЛАЛАЛАЛАЛАЛА 1816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    expressed sequence tag.
                                                                                                                                                                                                                                                                                                                                                                                                                                     from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Αm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Klopferspitz 18a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (12-MAR-1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                   S. Wiemann, sequenced by MediGenomix within the cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BP; 18 A; 1 C; 0 G; 1 T; 0 other;
                  /organism="Homo sapiens"
/clone="DKF2D566M1146"
/clone_lib="566 (synonym: hfkd2).
X1-2blue; sites NotI + SalI"
/clv_stage="fetal"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone_lib="566 (synonym: hfkd2). Vector pAMP1; host
Xl-2blue; sites NotI + SalI"
/dev_stage="fetal"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                   /db_xref="taxon:9606"
/mol_type="mRNA"
                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Obermaier
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /tissue_type="kidney"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               organism="Homo sapiens"
/clone="DKFZp566B2246"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         59,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chordata; Craniata; Vertebrata; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0.7%;
                                                                                                                                                 _type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 _type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mRNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Created)
Last upd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  င်
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  D-82152 Martinsried, GI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EST;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B., Mewes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         updated, Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       o
~:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₽₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            W., Gassenhuber J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (from clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ۳
                                                                                                                                                                                                                                                                                                                            Heubnerweg 6, 14059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Heubnerweg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GERMANY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             databases
                                                                       Vector pAMP1; host
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Euteleostomi; Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DKFZp566M1146)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ,
O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Wiemann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

밁 Ś

```
REFERENCE
AUTHORS
                                                                                                                                                          ACCESSION
VERSION
                                                                                                                                                                                                                                                                                  RESULT 4
CF280913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 3
AW334823/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S X
                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                    ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                         1799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1799
                                                                                                                               Oryza sativa
CF280913
CF280913.1 G
EST.
                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S39F5 AGS-1 I
AW334823
AW334823.1 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         μ
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 (bases 1 to 20)
Smullan, A. G., Arnold, J., Weise, M., Wunderlich, J.,
Edman, J.C., Kovacs, J. and Cushion, M.
Expressed sequence tags from Pneumocystis carinii
Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       l Similarity
20; Conserv
                                                                                                                                                                                                                                CF280913
14ETL--07-M07.bl Rice etiolated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pneumocystis carinii
Eukaryota; Fungi; Ascomycota; Pneumocystidomycetes;
Pneumocystidaceae; Pneumocystis.
                                                                                Oryza sativa
                                                                                                           Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tel: 606 257 2161
Fax: 606 257 1717
Email: staben@pop.uky.edu.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             University of Kentucky
101 Morgan Building, U
40506-0225, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Staben C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pneumocystis carinii
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         School of Biological Sciences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20
                                                                                                                                                                                                                                                                                                                                                                                                                                         АААААААААААААААА 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAAAAAAAAAAAAAAAA 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ААААААААААААААААА 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /db xref="taxon:4754"
/db host="E. coli"
/lab host="E. coli"
/clome lib="AGS-1"
/clome lib="AGS-1"
/clome lib="AGS-1"
/note="Vector: Lambda ZAP II; Site 1: EcoRI; Site 2:
/note="Vector: Lambda ZAP II; Site 1: EcoRI; Site 2:
/note="Vector: Lambda ZAP II; Site 1: EcoRI; Site 2:
/note="Vector: Lambda ZAP II; Site 1: EcoRI; Site 2:
/note="Vector: Lambda ZAP II; Site 1: EcoRI; Site 2:
/note="Vector: Lambda ZAP II; Site 1: EcoRI; Site 2:
/note="Vector: Lambda ZAP II; Site 1: EcoRI; Site 2:
/note="Vector: Lambda ZAP II; Site 1: EcoRI; Site 2:
/note="Vector: Lambda ZAP II; Site 1: EcoRI; Site 2:
/note="Vector: Lambda ZAP II; Site 1: EcoRI; Site 2:
/note="Vector: Lambda ZAP II; Site 1: EcoRI; Site 2:
/note="Vector: Lambda ZAP II; Site 1: EcoRI; Site 2:
/note="Vector: Lambda ZAP II; Site 1: EcoRI; Site 2:
/note="Vector: Lambda ZAP II; Site 1: EcoRI; Site 2:
/note="Vector: Lambda ZAP II; Site 1: EcoRI; Site 2:
/note="Vector: Lambda ZAP II; Site 1: EcoRI; Site 2:
/note="Vector: Lambda ZAP II; Site 1: EcoRI; Site 2:
/note="Vector: Lambda ZAP II; Site 1: EcoRI; Site 2:
/note="Vector: Lambda ZAP II; Site 1: EcoRI; Site 2:
/note="Vector: Lambda ZAP II; Site 1: EcoRI; Site 2:
/note="Vector: Lambda ZAP II; Site 1: EcoRI; Site 2:
/note="Vector: Lambda ZAP II; Site 1: EcoRI; Site 2:
/note="Vector: Lambda ZAP II; Site 1: EcoRI; Site 2:
/note="Vector: Lambda ZAP II; Site 1: EcoRI; Site 2:
/note="Vector: Lambda ZAP II; Site 1: EcoRI; Site 2:
/note="Vector: Lambda ZAP II; Site 1: EcoRI; Site 2:
/note="Vector: Lambda ZAP II; Site 1: EcoRI; Site 2:
/note="Vector: Lambda ZAP II; Site 1: EcoRI; Site 2:
/note="Vector: Lambda ZAP II; Site 1: EcoRI; Site 2:
/note="Vector: Lambda ZAP II; Site 1: EcoRI; Site 2: Lambda ZAP II; Site 1: EcoRI; Site 2:
/note="Vector: Lambda ZAP II; Site 1: EcoRI; Site 2: Lambda ZAP II; Si
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              organism="Pneumocystis
                                                                                                                                                            GI:33658299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; 0 C; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GI:6831180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pneumocystis
                                                                                                                                                                                                           CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0.7%;
                                                                                                                                                                                                      clone 14ETL--07-M07, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     University
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           G; 0 T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20 bp mRN
carinii cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                mRNA linear EST 1.
leaf plasmid cDNA library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       엱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        carinii"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mRNA
DNA 3',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kentucky,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mRNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Lexington,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Staben, C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31-JAN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (\overline{9}9-1-6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                     (14ETL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              _2: XhoI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
RESULT 5
CF282035
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 20; Conser
                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1799 АЛАДАЛАЛАЛАЛАЛАЛАЛ 1818
                                                                                                                                                                                                                                                                           Contact: Nahm B.H.

Genomics and Genetics Institute, Greendene Biotech Inc.; Division of Bioscience and Bioinformatics, MyongJi University
                                                                                                                                                                                                                                                                                                                                                I (bases 1 to 20)

Kim,J.S., Jun,K.M., Cheong,P.J., Kim,M.J., Lee,T.H.,

Song,S.I., Kim,J.K., Kim,Y.-K. and Nahm,B.H.

Large-scale Sequencing Analysis of Rice ESTs

Unpublished (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Oryza sativa
Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CF282035 20 bp mRNA linear EST 14-AUG-20 14ETL--09-F19.gl Rice etiolated leaf plasmid cDNA library (14ETL) CTY2a sativa cDNA clone 14ETL--09-F19, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kim,J.S., Jun,K.M., Cheong,P.J., Kim,M.J., Le
Song,S.I., Kim,J.K., Kim,Y.-K. and Nahm,B.H.
Large-scale Sequencing Analysis of Rice ESTs
Unpublished (2003)
                                                                                                                                                                                                                          Yongin, Kyeonggi, Ko
Tel: 82 31 330 6193
Fax: 82 31 321 6355
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CF282035
CF282035.1 GI:33659422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of Bioscience and Bioinformatics, MyongJi University Yongin, Kyeonggi, Korea Tel: 82 31 330 6195 Fax: 82 31 321 6355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Genomics and Genetics Institute, GreenGene Biotech Inc.; Division
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Nahm B.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 20)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           bhnahm@ggbio.com, bhn.
Location/Qualifiers
                                                                                                                                                                                                       bhnahm@ggbio.com,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note="Vector: pCR4-TOPO; Site_1: EcoRI; mRNA was capped with oligoribonuclectides and then used as templates for RT-PCR."
                                                                                                                   /organism="Oryza sativa"
/mol_type="mRNA"
/db xref="taxon:4530"
/clone="14ETL--09-F19"
/tissue_type="leaf"
/tissue_type="14 days after germination"
/lab_host="E.coli DH10B"
                                                                                                       cultivar="Nackdong"
                                                                                                                                                                                       ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /dev_stage="14 days after germination"
/lab_host="E.coli DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone="14ETL--07-M07"
/tissue_type="leaf"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /mol_type="mRNA"
/cultivar="Nackdong"
/db_xref="taxon:4530"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 organism="Oryza sativa"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0.7%; Score 20;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 lib="Rice etiolated leaf plasmid cDNA library
                                                                                                                                                                                                                                                                       Korea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                          bhnahm@bio.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              bhnahm@bio.myongji.ac.kr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ,
80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14;
                                                                                                                                                                                                       .myongji.ac.kr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lee, T.H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EST 14-AUG-2003
                                                                                                                                                                                                                                                                                                                                                                                                             Shin, Y.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Shin, Y.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

DEFINITION ACCESSION

CF299822 20 bp mRNA linear 7LEAF--03-P22.bl Rice leaf plasmid CDNA library II sativa cDNA clone 7LEAF--03-P22, mRNA sequence. CF299822

EST 15-AUG-2003 (7LEAF) Oryza

```
RESULT 7
CF299822/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 6
CF282414
                                                                      밁
                                                                                                á
                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Loc
Matches
                                                                                                                                        Matches
                                                                                                                                                    Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                  1799 даладалалалалалала 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1799 АААЛАЛАЛАЛАЛАЛАЛАЛАЛ 1818
                                                                    1 AAAAAAAAAAAAAAAAAA 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 (bases 1 to 20)

Kim,J.S., Jun,K.M., Cheong,P.J., Kim,M.J., Lee,T.H.,

Song,S.I., Kim,J.K., Kim,Y.-K. and Nahm,B.H.

Large-scale Sequencing Analysis of Rice ESTs

Unpublished (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CF282414 20 bp mRNA linear EST 14
14ETL--09-019.gl Rice etiolated leaf plasmid cDNA library
Cryza sativa cDNA clone 14ETL--09-019, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   l Similarity
20; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Yongin, Kyeonggi, Korea
Tel: 82 31 330 6193
Fax: 82 31 321 6355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 AAAAAAAAAAAAAAAAAA 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Genomics and Genetics Institute, GreenGene Biotech I of Bioscience and Bioinformatics, MyongJi University
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Nahm B.H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CF282414.1 GI:33659801
                                                                                                                                                    Similarity
                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                     bhnahm@ggbio.com, bhna
Location/Qualifiers
                                                                                                                                                                                                                     /note="Vector: pCR4-TOPO; Site 1: EcoRI; mRNA was capped with oligoribonucleotides and then used as templates for RT-PCR."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="Vector: pCR4-TOPO;
with oligoribonuclectides
RT-pCR."
                                                                                                                                                                                                                                                                                   /dev_stage="14 days after germination"
/lab_host="E.coli DH10B"
/clone_lib="Rice etiolated leaf plasmid cDNA library
                                                                                                                                                                                                                                                                                                                                     /db_xref="taxon:4530"
/clone="14ETL--09-019"
/tissue_type="leaf"
                                                                                                                                                                                                                                                                                                                                                                                       organism="Oryza sativa"
/mol_type="mRNA"
/cultivar="Nackdong"
                                                                                                                                                                                                                                                                         (14ETL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone lib="Rice etiolated leaf plasmid cDNA library (148TL)"
                                                                                                                                                    0.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0.7%;
                                                                                                                                    <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                    Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 20;
Pred. No.
                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        bhnahm@bio
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                     о
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Site 1: EcoRI; mRNA was capped and then used as templates for
                                                                                                                                                                     14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .myongji.ac.kr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Inc.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EST 14-AUG-2003
                                                                                                                                    ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Shin, Y.C.,
                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Сарв
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (14ETL)
                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
```

```
RESULT 8
CF301720/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ę
                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
                                                                    FEATURES
                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1799 АЛАЛАЛАЛАЛАЛАЛАЛАЛА 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CF299822.1
EST.
                                                                                                                                                                                                                                 1 (bases 1 to 20)

Kim,J.S., Jun,K.M., Cheong,P.J., Kim,M.J., Le Song,S.I., Kim,J.K., Kim,Y.-K. and Nahm,B.H. Large-scale Sequencing Analysis of Rice ESTs Unpublished (2003)
                                                                                                                                                Genomics and Genetics Institute, GreenGene Biotech Inc.; Division of Bioscience and Bioinformatics, MyongJi University Yongin, Kyeonggi, Korea
                                                                                                                                                                                                                                                                                                                                      Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CF301720 20 bp mRNA linear EST 15-AUG-2003 7LEAF--06-L01.bl Rice leaf plasmid cDNA library II (7LEAF) Oryza
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Genomics and Genetics Institute, GreenGene Biotech Inc.; Division of Bioscience and Bioinformatics, Myongdi University Yongdin, Kycengdi, Korea
Tel: 82 31 330 6193
Fax: 82 31 321 6355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             l (bases 1 to 20)

Kim,J.S., Jun,K.M., Cheong,P.J., Kim,M.J., Lee,T.H.,

Song,S.I., Kim,J.K., Kim,Y.-K. and Nahm,B.H.

Large-scale Sequencing Analysis of Rice ESTs

Unpublished (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                  Contact: Nahm B.H
                                                                                                                                                                                                                                                                                                                                                                                                          Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CF301720.1 GI:33673481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sativa cDNA clone 7LEAF--06-L01, mRNA sequence
CF301720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                   Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Nahm B.H.
                                                                                                       jin, Kyeonggi, Koi
: 82 31 330 6193
: 82 31 321 6355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                 bhnahm@ggbio.com, bhnahm@bio.myongji.ac.kr.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         bhnahm@ggbio.com, bhna
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xref="taxon:4530"
/clone="TLEAF-03-P22"
/clone="TLEAF-03-P22"
/tissue_type="leaf"
/dev_stage="7 days after germination"
/lab_host="E.coli DH10B"
/lab_host="E.coli DH10B"
/clone_lib="Rice_leaf_plasmid_cDNA_library_II_(7LEAF)"
/clone_lib="Rice_leaf_plasmid_cDNA_library_II_(7LEAF)"
/clone="Vector: pCR4-TOPO; Site_l: EcoRI; mRNA_was_capped
with_oligoribonuclectides_and_then_used_as_templates_for_RT-PCR."
/organism="Oryza sativa"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     organism="Oryza sativa"
/mol_type="mRNA"
/cultivar="Nackdong"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GI:33671583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0.7%; Score 20;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              bhnahm@bio.myongji.ac.kr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         。
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 20
                                                                                                                                                                                                                                                                                                 Lee, T.H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Shin, Y.C.,
                                                                                                                                                                                                                                                                                                   Shin, Y.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ·
•
    RESULT 10
CF310604
                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 9
CF302027/c
                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                             Matches
                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                      1799 AAAAAAAAAAAAAAAAAA 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1799 АААААААААААААААААА 1818
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20 AAAAAAAAAAAAAAAAA 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 (bases 1 to 20)
Kim, J.S., Jun, K.M., Cheong, P.J., Kim, M.J., Lee, T.H., Song, S.I., Kim, J.K., Kim, Y.-K. and Nahm, B.H.
Large-scale Sequencing Analysis of Rice ESTs
Unpublished (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Yongin, Kyeonggi, Ko
Tel: 82 31 330 6193
Fax: 82 31 321 6355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CF302027
CF302027.1 GI:33673788
EST.
Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CF302027

7LEAF--07-C16.b1 Rice leaf plasmid cDNA library II (7LEAF) Oryza sativa cDNA clone 7LEAF--07-C16, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of Bioscience and Bioinformatics, MyongJi University
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Nahm B.H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genomics and Genetics Institute, GreenGene Biotech Inc.; Division
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                  bhnahm@ggbio.com, bhna
Location/Qualifiers
                                                                                                                                                                       /clone="7LEAF--07-C16"
/tissue_type="leaf"
/tissue_type="leaf"
/dev_stage="7 days after germination"
/lab_host="E.coli DH108"
/clone_lib="Rice_leaf_plasmid_cDNA_library_II_(7LEAF)"
/note="Vector: pCR4-TOPO; Site_1: EcoRI; mRNA was capped
with oligoribonuclectides and then used as templates for
RT-PCR."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /cultivar="Nackdong"
/db xref="taxon:4530"
/db xref="taxon:4530"
/clome="TLAFF--06-TO1"
/tissue_type="leaf"
/dev stage="7 days after germination"
/dev stage="7 days after germination"
/lab_host="E.coli DH10B"
/clome_lib="Ricel leaf plasmid cDNA library II (7LEAF)"
/note="Vector: pCR4-TOPO; Site 1: EcoRI; mRNA was capped
with oligoribonucleotides and then used as templates for
RT-PCR."
                                                                                                                                                                                                                                                                                                                                  cultivar="Nackdong"
/db_xref="taxon:4530"
                                                                                                                                                                                                                                                                                                                                                                           organism="Oryza sativa"
|mol_type="mRNA"
                                                                                              100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Korea
                                                                         0; Mismatches
                                                                                              Score 20; pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       bhnahm@bio.myongji.ac.kr
                                                                                              0 pg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0 B
                                                                                                                  14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

밁

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 11
CF313067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                  JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                        EYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 20
                                                                                                            TITLE
                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1799 ААЛАЛАЛАЛАЛАЛАЛАЛА 1818
                                                                                                                                                                                                                                                                                                                            library (HD)
CF313067
CF313067.1 G
Genomics and Genetics Institute, GreenGene Biotech Inc.; Division of Bioscience and Bioinformatics, MyongJi University Yongin, Kyeonggi, Korea
                                                           Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnollophyta; Liliopsida; Poales; Poaceae; Ehrhartoideae; Oryzeae; Oryza.

1 (bases 1 to 20)

Kim,J.S., Jun,K.M., Cheong,P.J., Kim,M.J., Lee,T.H., Shin,Y.C., Song,S.I., Kim,J.K., Kim,Y.-K. and Nahm,B.H.

Large-scale Sequencing Analysis of Rice ESTs

Unpublished (2003)

Contact: Nahm B.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 (bases 1 to 20)

Kim,J.S., Jun,K.M., Cheong,P.J., Kim,M.J., Lee,T.H.,

Song,S.I., Kim,J.K., Kim,Y.-K. and Nahm,B.H.

Large-scale Sequencing Analysis of Rice ESTs

Unpublished (2003)
                                                                                                                                                                                                                                                                                                                                                                HD--01-B02.g1 OsHDAC1-overexpressing transgenic rice plasmid cIlibrary (HD) Oryza sativa cDNA clone HD--01-B02, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 AAAAAAAAAAAAAAAAAA 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CF310604 20 bp mRNA linear EST 15-AUG-2003
ABF--05-F14.gl ABF3-overexpressing transgenic rice plasmid CDNA
library (ABF) Oryza sativa CDNA clone ABF--05-F14, mRNA sequence.
                                                                                                                                                                                                                                                              Oryza sativa
                                                                                                                                                                                                                                                                                                        EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tel:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genomics and Genetics Institute, GreenGene Biotech Inc., of Bioscience and Bioinformatics, MyongJi University
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CF310604.1 GI:33682365
EST.
                                                                                                                                                                                                                                                                                    Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Nahm B.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CF310604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             82 31 330 6193
82 31 321 6355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               bhnahm@ggbio.com, bhnahm@bio.myongji.ac.kr.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kyeonggi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /dev_stage="14 days after germination"
/lab_host="E.coli DH10B"
/clone lib="ABF3 overexpressing transgenic rice plasmid cDNA library (ABF)"
colone library (ABF)"
/note="Vector: pCR4-TOP0, Site 1: EcoRI; Leaf was dried for 2hrs. Oligo-capped mRNA was reverse transcribed and then used for PCR. mRNA was prepared from ABA-responsive element binding transcription factor 3 overexpression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /cultivar="Nackdong"
/db_xref="taxon:4530"
/clone="ABF--05-F14"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 organism="Oryza sativa"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tissue_type="leaf"
                                                                                                                                                                                                                                                                                                                            GI:33684828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Korea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; Score 20; DB;
%; Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                            20 bp
                                                                                                                                                                                                                                                                                                                                                                                                            mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Division
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 12
CF313569/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local
                                                                                                                                                                                                                                                                        Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1799 АЛАЛАЛАЛАЛАЛАЛАЛАЛ 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20;
                                                                                                                                                                                                                                                                                                                                                                                                                                         Kim,J.S., Jun,K.M., Cheong,P.J., Kim,M.J., Lee,T.H., Song,S.I., Kim,J.K., Kim,Y.-K. and Nahm,B.H. Large-scale Sequencing Analysis of Rice ESTs Unpublished (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HD--01-L22.b1 OsHDAC1-overexpressing transgenic rice plasmid cDNA library (HD) Oryza sativa cDNA clone HD--01-L22, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tel:
                                                                                                                                                                                                                                                                                                                                                                                  Genomics and Genetics Institute, of Bioscience and Bioinformatics,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CF313569.1 GI:33685330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CF313569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email:
                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Nahm B.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ehrhartoideae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAAAAAAAAAAAAAAAA 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (bases 1 to 20
                                                                                                                                                                                                                                                                                                                           gin, Kyeonggi, Ko:
82 31 330 6193
82 31 321 6355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      82 31 330
82 31 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   bhnahm@ggbio.com, bhnahm@bio.myongji.ac.kr.
Location/Qualifiers
                                                                                                                                                                                                                                                                                     Location/Qualifiers
/note="Vector: pCR4-TOPO; Site_1: EcoRI; Callus was treated with ABA(20um) for lhr. Oligo-capped mRNA wareverse transcribed and then used for PCR. mRNA was derived from rice Histone Deacetylase overexpression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="Vector: pCR4-TOPO; Site_1: EcoRI; Callus was treated with ABA(20um) for 1hr. Oligo-capped mRNA was reverse transcribed and then used for PCR. mRNA was
                                                                          CDNA library (HD) "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone lib="OsHDAC1-overexpressing transgenic rice plasmid
cDNA library (HD)"
                                                                                                              tissue_type="callus"
/dev_stage="proliferated callus on 2N6 media for 2 weeks"
/lab_host="B.coli_DH10B"
                                                                                                                                                                                                            /organism="Oryza sativa"
/mol_type="mRNA"
/cultivar="Nackdong"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             derived from rice Histone Deacetylase overexpression
                                                                                                                                                                         clone="HD--01-L22"
                                                                                                                                                                                           db_xref="taxon:4530"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tissue_type="callus"
|dev_stage="proliferated callus on 2N6 media for 2 weeks"
|lab_host="B.coli DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Oryza sativa"
/mol_type="mRNA"
/cultivar="Nackdong"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    db_xref="taxon:4530"
clone="HD--01-B02"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Oryzeae; Oryza.
                                                                                            lib="OsHDAC1-overexpressing transgenic
                                                                                                                                                                                                                                                                                                                                                                      Korea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                         bhnahm@bio.myongji.ac.kr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
80
                                                                                                                                                                                                                                                                                                                                                                                  GreenGene Biotech Inc.; Division , MyongJi University
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST 15-AUG-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                rice
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                       ₩as
                                                                                                plasmid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

```
ACCESSION
VERSION
KEYWORDS
                                                                                                                    RESULT 14
CF321721/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 13
CF319133/c
                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
         SOURCE
                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1799
                                                                                                                                                                                                                                                  1799 АААААААААААААААААА 1818
                                                                                                                                                                                                              20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20;
                                                                                                                                                                                                                                                                                      20;
       EST.
Oryza sativa
                                           CF321721
CF321721.1 GI:33693482
                                                                            HD--13-B05.g1 OsHDAC1-overexpressing transgenic rice plasmid cllbrary (HD) Oryza sativa cDNA clone HD--13-B05, mRNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Yongin, Kyeonggi, Korea
Tel: 82 31 330 6193
Fax: 82 31 321 6355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Genomics and Genetics Institute, GreenGene Biotech Inc.; Division of Bioscience and Bioinformatics, MyongJi University
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kim,J.S., Jun,K.M., Cheong,P.J., Kim,M.J., Lesong,S.I., Kim,J.K., Kim,Y.-K. and Nahm,B.H. Large-scale Sequencing Analysis of Rice ESTs Unpublished (2003)
Contact: Nahm B.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Oryza sativa
Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       library (HD)
CF319133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HD--09-I13.b1 OsHDAC1-overexpressing transgenic rice plasmid cDlibrary (HD) Oryza sativa cDNA clone HD--09-I13, mRNA sequence.
                                                                                                                    CF321721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CF319133.1 GI:33690894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                              AAAAAAAAAAAAAAAAAA 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         АААААААААААААААА 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAAAAAAAAAAAAAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (bases 1 to 20)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                bhnahm@ggbio.com, bhnahm@bio.myongji.ac.kr.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                             /note="Vector: pCR4-TOPO; Site_1: EcoRI; Callus was treated with ABA(20um) for 1hr. Oligo-capped mRNA was reverse transcribed and then used for PCR. mRNA was
                                                                                                                                                                                                                                                                                                                                                                                derived from rice Histone Deacetylase overexpression line."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone_lib="OsHDAC1-overexpressing transgenic rice plasmid cDNA \operatorname{library} (HD)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tissue_type="callus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'db_xref="taxon:4530"
'clone="HD--09-113"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       organism="Oryza sativa"
|mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cultivar="Nackdong"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0.7%; Score 20;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                      0.7%;
100.0%;
                                                                                                                                                                                                                                                                                    ..
..
                                                                                                                                                                                                                                                                                                    Score 20; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                20 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20 bp
                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
BG ;
                                                                                                                  mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14;
                                                                                                                                                                                                                                                                                                                   14; Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 20;
                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Lee, T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EST 15-AUG-2003
                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                 Gaps
                                                                                             CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDNA
                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                       SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 15
CF328565
                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                            JOURNAL
                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1799 AAAAAAAAAAAAAAAAAA 1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
                                                                                       Yongin, Kyeonggi, Ko
Tel: 82 31 330 6193
Fax: 82 31 321 6355
                                                                                                                               Genomics and Genetics Institute, GreenGene Biotech Inc.; Division of Bioscience and Bioinformatics, MyongJi University YongIn, Kyeonggi, Korea
                                                                                                                                                                                                      ( Lases 1 to 20)
( Lagrange Sang, S.I., Kim, M.J., Lee, T.H.,
Song, S.I., Kim, J.K., Kim, Y.-K. and Nahm, B.H.
Large-scale Sequencing Analysis of Rice ESTs
Unpublished (2003)
                                                                                                                                                                                                                                                                                                  Oryza sativa
Oryza sativa
Oryza sativa
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                MACL--03-II4.bl Rice callus plasmid cDNA library (NACL) Oryza sativa cDNA clone NACL--03-II4, mRNA sequence.
CF328565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 (bases 1 to 20)
Kim,J.S., Jun,K.M., Cheong,P.J., Kim,M.J., Lee,T.H., Song,S.I., Kim,J.K., Kim,Y.-K. and Nahm,B.H. Large-scale Sequencing Analysis of Rice ESTs Unpublished (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                             EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Yongin, Kyeonggi, K
Tel: 82 31 330 6193
Fax: 82 31 321 6355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Oryza sativa
                                                                                                                                                                                         Contact: Nahm B.H.
                                                                                                                                                                                                                                                                                                                                                                                                               CF328565.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of Bioscience and Bioinformatics, MyongJi University Yongin, Kyeonggi, Korea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Genomics and Genetics Institute, GreenGene Biotech Inc.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Nahm B.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAAAAAAAAAAAAAAAA 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                     bhnahm@ggbio.com, bhna
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="Vector: pCR4-TOPO; Site_1: EcoRI; Callus was treated with ABA(20um) for Ihr. Oligo-capped mRNA was reverse transcribed and then used for PCR. mRNA was derived from rice Histone Deacetylase overexpression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /dev_stage="proliferated callus on 2N6 media for 2 weeks" /lab_host="E.coli DH10B" /clone_lib="OsHDAC1-overexpressing transgenic rice plasmid cDNA library (HD)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mahm@ggbio.com,
/organism="Oryza sativa"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       organism="Oryza sativa"
/mol_type="mRNA"
/cultivar="Nackdong"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tissue_type="callus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     clone="HD--13-B05"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        db_xref="taxon:4530"
                                                                                                                                                                                                                                                                                                                                                                                                               GI:33805376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 20;
Pred. No.
                                                                          bhnahm@bio
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     bhnahm@bio.myongji.ac.kr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0 B
                                                                            .myongji.ac.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14;
```

0

Gaps

0

. ጵ

Shin, Y.C.,

Length Indels

```
Search completed: March 7, 2004, 20:07:28 Job time: 7092 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 0.7%; Score 20; DB 14; Length 20; Best Local Similarity 100.0%; Pred. No. 0; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                            /cultivar="Nackdong"
/db_xref="taxon:4530"
/clone="NACL--03-II4"
/tissue_type="callus"
/tissue_type="callus"
/dev_stage="proliferated callus on 2N6 media for 30 days"
/dev_stage="proliferated callus on 2N6 media for 30 days"
/dev_stage="proliferated callus on 2N6 media for 30 days"
/lab_host="E.coli DH10B"
/clone="F.coli DH10B"
/clone="T.coli DH10B"
/clone="T.coli DH10B"
/note="T.coli DH10B"
/note="T.coli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
```

Ş ₽

ORIGIN